



2017 OSC E-COMMERCE CONFERENCE

AGENDA

Wednesday, April 19, 2017 – McKimmon Center | Raleigh, NC

- 8:15 – 8:20 Call to Order – Taylor Brumeloe, Office of the State Controller, Central Compliance Manager
- 8:20 – 8:30 Opening Remarks – Dr. Linda Combs, State Controller
- 8:30 – 9:30 2017 Payment Industry Outlook – Glenn Fodor, Senior Vice President and Head of Strategic Intelligence, First Data
- 9:30 – 10:30 Best Practices to Reduce Disputes & Chargebacks, Andryu Llovera, American Express
- 10:30 – 11:00 Break
- 11:00 – 12:00 Digital Disbursements & Payment Industry Trends in the U.S. – Everette Glass, Core & Emerging Payments Technologies, Bank of America
- 12:00 – 1:00 Lunch
- 1:00 – 2:00 Cyber Security: Case Studies and Tips from the FBI – Special Agent Peter Ahearn, Federal Bureau of Investigation
- 2:00 – 3:00 eCommerce: The Risk and Rewards – Jon Bonham, Director – Enterprise Risk & Compliance, Coalfire
- 3:00 – 3:30 Break
- 3:30 – 4:30 Panel Discussion: Robin Mayo – East Carolina University, Becky Smith – University of North Carolina at Charlotte, Amanda Redic – Department of Natural & Cultural Resources, Rick Owens – Pitt Community College, Melissa Rivenbark – Department of State Treasurer
- 4:30 – 4:35 Closing Remarks – Taylor Brumeloe, Office of the State Controller

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First Data



Bank of America
Merrill Lynch





2017 OSC eCommerce Conference

Continuing Professional Education
North Carolina Office of the State Controller

Date: April 19, 2017 | 8:15 a.m. to 4:45 p.m.

Location: The McKimmon Conference and Training Center
N.C. State University
1101 Gorman Street
Raleigh, NC 27606

Registration Fee: \$60 per attendee
Credit Card
CMCS Transfer ([Click Here for CMCS Instructions](#))
Check (online only)

Objective: The E-Commerce conference presented by the NC Office of the State Controller provides an opportunity for State employees to learn about new E-Commerce trends, meet with vendors on Statewide contracts, and interact with fellow E-Commerce professionals within NC State Government. This conference is applicable to State employees who are directly involved with E-Commerce or the Payment Card Industry (PCI) Data Security Standards requirements within their organization.

Content/Instructors:

2017 Payment Industry Outlook - Glenn Fodor, Senior Vice President and Head of Strategic Intelligence, First Data

Best Practices to Reduce Disputes & Chargebacks - Andryu Llovera, American Express

Digital Disbursements & Payment Industry Trends in the U.S. - Everett Glass, Core & Emerging Payments Technologies, Bank of America

Cyber Security: Case Studies and Tips from the FBI - Special Agent Peter Ahearn, Federal Bureau of Investigation

Ecommerce: The Risk and Rewards - Jon Bonham, Director – Enterprise Risk and Compliance, Coalfire

Panel Discussion - Speakers TBD

CPE Credit Offered: Up to 7 hours

Materials: [Click Here](#) - Coming Soon

Teaching Method: Lecture

Mini-breakfast: Available beginning at 7:30 a.m. (breakfast breads, fruits, coffee, soft drinks, water)

Lunch: 12:00 p.m. – 1:00 p.m. (Bourbon Chicken, Sautéed Vegetable Medley, Roasted Garlic Mashed Potatoes, Assorted Rolls and Butter, Chef Choice Dessert)

Prerequisites: Employed by a state agency, university, community college or a local unit of government that participates in the State's E-Commerce Program.

Advance Preparation: None

Level: Basic

Exhibitors:

First Data

American Express

Bank of America

Coalfire

DocuSign

NC E-Procurement Program

Secretary of State - E-Notary Program

Developer and Sponsor: North Carolina Office of the State Controller



Office of the State Controller

2017 eCommerce Conference Speaker Bios

First Data – Glen Fodor

Glenn Fodor joined First Data in August of 2014 as Senior Vice President and is head of Corporate Strategy and Intelligence. Previously, Glenn was a Partner and Senior Equity Research Analyst at Autonomous Research, a boutique research firm focusing on the financial and payment technology industries. Prior to Autonomous, Glenn held equity analyst roles at Morgan Stanley, UBS and JP Morgan. In 2012 Glenn was named one of Institutional Investor's "Up-and-Coming" analysts. In addition, Glenn worked in retail payment strategy at Chase where he helped optimize the firm's payment assets, forge new partnerships and refine its direction in payments. Glenn graduated cum laude with a B.S. in Finance from Rutgers University and is a Chartered Financial Analyst (CFA) charter holder.

American Express – Andryu Llovera

Andryu Llovera has been a member of the American Express team for three years and has held a number of positions including work with Network Engineering Optimization, the Process Excellence Team and Technology to identify, prioritize and generate solutions for key servicing pain points.

Andryu's current role is to provide consultative disputes support to our U.S. Merchants which includes driving stronger engagement, identifying gaps and implementing solutions. He is also responsible for reducing the number of disputes and chargebacks & driving a better Merchant experience.

Andryu has a Bachelor of Science degree in Business Administration from Kaplan University and is expecting to complete his MBA from Nova Southeastern University this spring.

Bank of America – Everette Glass

Everette has been with Bank of America for 19 years. Everette has been in the payments industry for 16 years and is a subject matter expert on the Bank of America host-to-host and web-based platforms as well as being SWIFT Corporate certified. He is currently working in the Core and Emerging Payment Technologies group which is tracking emerging digital payment technologies and trends around the globe.



Federal Bureau of Investigation – Special Agent Peter J. Ahearn, Jr.

Special Agent Peter J. Ahearn, Jr. has been with the FBI since February 2009. SA Ahearn is assigned to the Cyber Crimes Squad in the Charlotte Division, Raleigh Resident Agency and is currently investigating Cyber Crimes involving both criminal and national security related network intrusion events in and around North Carolina. Prior to joining the FBI, SA Ahearn served as an Information Security Consultant in the private sector serving a multitude of federal government clients in the Washington DC area. SA Ahearn has extensive experience in the identification, investigation and resolution of Cyber related intrusions and is a member of the FBI's Cyber Action Team, a nationwide team of highly trained and experienced cyber agents dedicated to intrusion response, mitigation, and investigation. Due to his expertise in intrusion matters, SA Ahearn was assigned to the FBI's Cyber Task Force where he is currently engaged in a multi-agency effort to resolve numerous complex and sophisticated computer and network intrusion matters.

Coalfire – Jon Bonham

Mr. Bonham is the Director of Enterprise Risk and Compliance at Coalfire Systems, Inc., the largest independent IT auditing firm in the country and the QSA for the state of North Carolina and others. Jon is certified as a CISA (Certified Information Systems Auditor) and a QSA (PCI – Qualified Security Assessor) and has been working with large diversified organizations to help define, create and manage their compliance programs for the last eight years. He specializes in working with state and local governments, higher education, and hospital systems across the country.

A hand holding a smartphone is the central focus, with a semi-transparent blue overlay across the middle of the image. The background is a soft-focus bokeh of light blue and white circles. The text is white and positioned on the blue overlay.

2017 Payment Industry Outlook

First Data Corporate Strategy & Intelligence

This document is a collection of opinions that are offered solely as a courtesy, and they do not represent business or legal advice. The research is gathered from a wide range of industry publications, analyst reports, white papers, websites, and interviews. The statements in this document related to future business or financial performance may constitute forward-looking statements and actual results or performance may vary.

First Data[®]

First Data: Global Payments Leader

Unrivaled Distribution Network



#1
Merchant Acquirer

6 Million
Business Locations

#3
U.S. Debit Network

1 Million
STAR Locations

#1
Issuer Processor

4,000
Financial Institutions

Most Complete Array of Solutions in the Industry

- **79B transactions** processed annually, over **2,500 per second**
- Engaged by **47 of top 50 Fortune 500** companies
- **\$1.9T in global payment volume**, process 10% of U.S. GDP annually
- Process **4 out of 10 transactions** at the point-of-sale in the US
- World leader in **eCommerce acquiring**
- **1.5x the accounts on file** of the nearest competitor
- Process for **5 of the top 8 U.S. private label cards** and **22 of the top 50 U.S. general purpose issuers**
- **110M+** STAR cards issued, with a network of **3,500 Financial Institutions**

Source: FDC Investor Day 2016

First Data: Trusted Partner for Government Transactions

Scale and Experience

\$2.6 Trillion

Tax payments processed annually for the U.S. Treasury (EFTPS)

2.3 Million

Payments of State Tax annually via remitOne® and StateEFT®

1 Million+

Medicaid Claims Billed per Month via Authenticare®

FISMA High

Federal Security Compliance Level (EFTPS)

Industry Specific Government Solutions

30+ Years

In the business

760 Solutions

For Government, Merchants, & Financial Institutions



Deep Experience

Statewide Acquiring Contracts
NASPO Valuelink Contract
EFTPS Federal Contract

250+ Government Accounts

Across Federal, State, Local, and Higher Education

43 States

Current contracts in place

50 of Top 100 Banks

Use FDGS Tax Payment Solutions

Executive Summary – Outlook

2017 is shaping up to be another evolutionary year for payments



- 1 Investments in **digital payments will accelerate** as both merchants and banks **fight for their share of the consumer wallet**
- 2 Banks are seeing a **strong macro environment** and favorable industry tailwinds
- 3 **Collaboration will continue** for Banks + FinTechs
- 4 **Faster payments will take hold in 2017**; blockchain will be a longer journey
- 5 **eCommerce** continues its path to **ubiquity**, but so does **fraud**
- 6 **Amazon's** ambitions will **continue to challenge retailers** online and in-person, but it also **creates opportunities**
- 7 **Remittance processing** in Government continues to show **strong demand** despite 20 years of growth in electronic Govt payments



Part 1: Merchants

Government Merchants Have a lot to Contend With

From digital commerce to EMV to Security

Opportunities

- Fortunately, the **EMV transition** should **smooth out in 2017**¹
- **Opportunities exist** to ride the ubiquity of consumer technologies to create new **connected commerce** experiences

Challenges

- Retail locations, **chargebacks**, **POS upgrades**, **security**, all remain significant challenges
- Online is just as challenged; **fraud is rising** and **mobile apps** require constant investment
- **Limited Govt Investment** in Tokenization can lead to data breaches
- **Government EMV** rollouts have been **slower than Commercial**



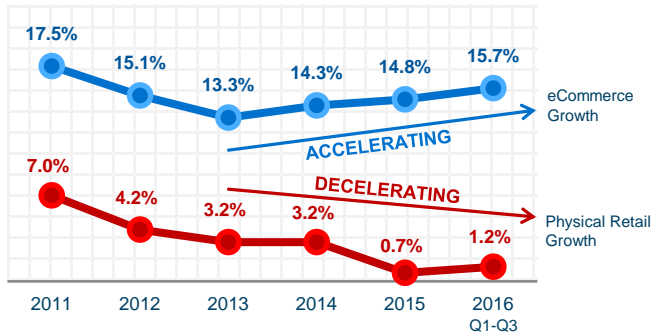
Source: (1) CDC Strategy Analysis

eCommerce: Continued Growth and Growing Pains

eCommerce will continue to gain share from retail, but fraud will follow

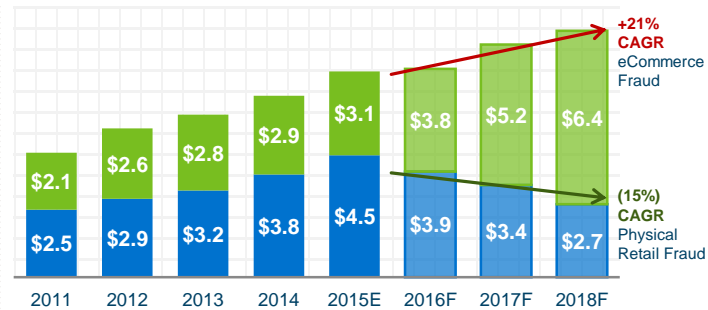
eCommerce volume growth continues to accelerate...

U.S. purchase volume growth, y/y¹



...but EMV will increasingly drive fraud online

U.S. merchant payment fraud losses³



The Growth Story

- **More than 25%** of 2016 holiday sales were via eCommerce, up from 20% in 2015²
- **Growth rates are accelerating**
- **Mobile** will maintain momentum in non-retail segments as Millennials (18-34 age) becoming consuming Govt products and services

The Risk

- eCommerce usually still means **using a 16-digit card number**, just like in 1996
- U.S. EMV shift has **driven fraud online**, which is expected to continue
- **Both the disease and the cure** are expensive and labor-intensive for online payment s

Sources: (1) U.S. Census Bureau, Quarterly E-Commerce Report; FDC Strategy analysis; (2) FDC SpendTrend "2016 Holiday Spend Analysis", January 2017, (3) FT Partners "Transaction Security at the Nexus of E-Commerce, Payment Market Structure Complexity and Fraud".

eCommerce: The 800-Pound Gorilla

Amazon is ubiquitous in eCommerce today, but is its long-term goal “powering” commerce?

Amazon’s eCommerce success has been well documented...

26.2%

of shoppers surveyed said they bought most of their 2016 holiday gifts from Amazon, beating all other retailers¹

From 2014-2015, Amazon captured

60.5%

of U.S. eCommerce growth

and

23.8%

of U.S. retail sales growth²

Amazon has an estimated

63 million

Prime customers, and Prime reaches nearly half of all U.S. households^{3,4}

...however, Amazon’s broader goal may be to “power” all forms of commerce



- Amazon is experimenting in a number of **historically “non-Internet” retail and personal services** segments⁵
- Amazon alone may not scale reference designs for seamless new commerce experiences, but it **could resell the underlying technology** (a la AWS)

Sources: (1) Forbes, “Amazon Is Shoppers’ Top Destination For Holiday Gifts, Increasing Lead Over Walmart,” December 15, 2016; (2) Internet Retailer, “The Winners’ Gallery,” May 2, 2016; (3) Fortune, “Amazon Prime Members Now Outnumber Non-Prime Customers,” July 11, 2016; (4) CNN.com, “Amazon Prime now reaches nearly half of U.S. households”. (5) Company website

eCommerce: FDC's Outlook for 2017

As more goods and services are available online, what will draw them back into stores?

In 2017, eCommerce will likely **drive technology and business model efficiencies for online and brick-and-mortar retailers** that may not fend off emerging threats, but may **give them a fighting chance**

Trend

FDC Outlook

Retailers Rethink Retail

- Costly retail stores **begin to double as local distribution centers**, as well as **low-inventory “showrooms”** for goods to be delivered after the visit
- Amazon’s “Go” grocery store concept could **spur other retailers to accelerate development of next-generation omnichannel technology**

Security & Fraud Remain Top of Mind

- **Retailer data breaches will likely continue¹**, but consumers are growing numb
- **Anti-fraud and tokenization products** will continue to see rapid sales growth as the EMV migration continues to push card fraud online

Solving the “Last Mile” Challenge

- **Restaurants, grocery stores, and personal services** will continue to expand on-demand eCommerce offerings, creating a need for **local distribution and delivery services** to close the “last mile” gap. Online EBT/SNAP pilots are underway
- **Uber, TaskRabbit, Postmates**, and similar companies will seek to fill the void

Source: (1) Javelin, “The Financial Impact of Fraud: Merchants Challenged as E-Commerce Fraud Rises Post-EMV”, October 2016

Transforming the Competitive Landscape of Retail

Extracting growth from more than simply “new locations”

The largest U.S.-based full-line sporting goods retailer...



...creates an all-in-one digital platform for youth sports leagues



A prominent Midwestern grocery chain...



...opens an in-store clothing boutique



A leading operator of college and university bookstores...



...launches an on-campus beauty and cosmetics concept



A contemporary home furnishings retailer...



...unveils a chain of hotels to sustain overall brand growth



Sources: Company websites.

Transforming Government With Automation

The pendulum continues to swing towards self-service Government kiosks and automation

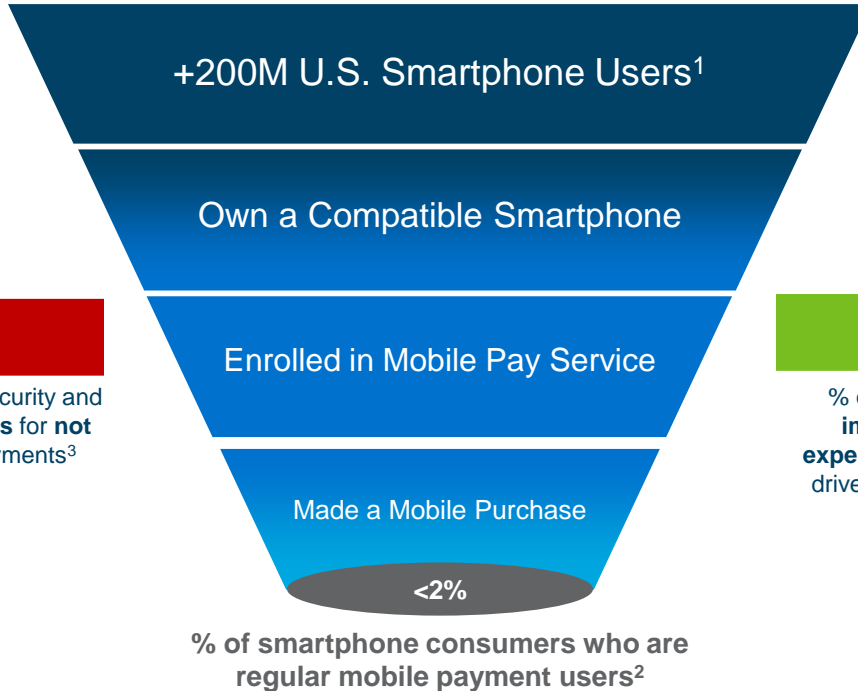


With 50%+ of retail activities automatable¹, the shopping experience will continue to change which will drive more demand for Government self service

Sources: (1) "Where machines could replace humans—and where they can't (yet)", McKinsey, July 2016. Company reports and websites.

Mobile Wallet Adoption














Adoption slowed by risk concerns and unclear value propositions



Sources: (1) eMarketer US Forecast of Smartphone users for 2016, (2) "Study of Mobile Banking & Payments", 3rd Edition, First Annapolis, " Aug 2016 and FDC Strategy estimates, (3) "Future of Retail Study", Walter Sands, Feb 2016, (4) "North America Consumer Digital Payments Survey", Accenture, Jul 2015.

Mobile Wallet Landscape

Millennials are the mobile and alternative payments users... once they start working, demand will grow

The Types	The Players	Key Points	FDC Outlook
Large Techs & Networks	     	<ul style="list-style-type: none"> • Dominates current wallet mindshare (+70%¹) • Driven by new technology (e.g., Apple Pay, Samsung's MST) 	<ul style="list-style-type: none"> • Improving In-App + In-Browser payment experiences will accelerate adoption • New features emerge: rewards, P2P, omnichannel, loyalty, etc. • Secure international footholds
Financial Institutions	   	<ul style="list-style-type: none"> • Integrated with existing mobile banking experience • Consumer surveys suggest "banks" are the most trusted provider (+55%¹), yet they remain one of the least-used wallet options 	<ul style="list-style-type: none"> • Mobile banking, payments, and P2P become more deeply integrated • Continued jockeying for top-of-wallet placement • Leverage API to create more utility
Merchants	  	<ul style="list-style-type: none"> • Newest form of mobile wallets • Started as a response to the Tech Wallets, but evolved into merchant commerce experiences 	<ul style="list-style-type: none"> • Customer loyalty and experience to spur adoption • New entrants to emerge • Partnerships proliferate

Bottom Line: the wallet horserace will only get more jumbled in 2017

Sources: (1) "Study of Mobile Banking & Payments", 3rd Edition, First Annapolis, " Aug 2016. Company websites.

Mobile Wallet Partnerships

Many issuers have given limited time offers to encourage adoption

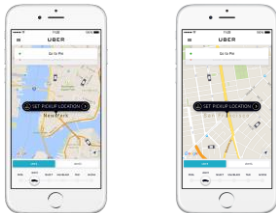


Discover cardholders received an automatic 10% cashback bonus on purchases made using Apple Pay¹



Android Pay users received \$10 - \$15 towards their checkout at online retailers Jet.com and Newegg²

UBER



New Uber users were offered a free first ride when they used their Capital One credit card³






AMEX Checkout users were able to book with points for their Airbnb reservations⁴

Sources: Samples of promotional offers from company web sites: (1) AppleInsider, "Discover cards to support ApplePay on Sept. 16 with 10% cash-back offer", Sept 2015; (2) Android Pay web site, (3) Fortune, "Capital One is offering free Uber rides to card members", Sept 2016; (4) Fortune.com, "Use Your AmEx Points to Book on Airbnb", Nov 2015

Government Mobile Apps use is also increasing Rapidly

Govt Usage of Mobile Wallets is new...

The U.S. Treasury's Bureau of the Fiscal Service provides the public with three types of Digital Wallets through www.pay.gov.

		
<p>PayPal allows users to connect with just a username and password. Users have access to their stored account balances, bank accounts, credit cards, and even pre-paid cards.</p>	<p>Dwolla is focused on lowering transactional costs for its users and its merchants / businesses</p>	<p>Amazon Payments is a way for customers to make payments or purchase goods and services from US based websites using the payment methods stored within an Amazon.com account.</p>

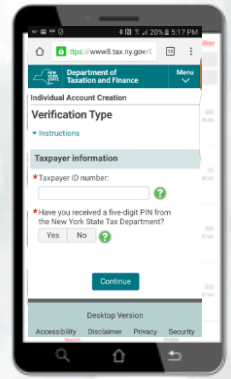
Government eCommerce Convergence

Native Mobile iOS and Android Applications



In home care service, with GPS and Time Tracking effectively reduces Medicaid fraud, waste and abuse.

Responsive Design Applications



Occasional Users - monthly, quarterly, or one time use.
 ADA and 508 Compliant from a PC, Tablet and SmartPhone

Millennials' expectations of instant gratification are intensifying, with 75% of 18 to 32 year olds agreeing with the following statement: "I get frustrated with things that waste my time..."
 Source: YPulse

Connected Commerce: Overview

More than omnichannel, it's about embedded, personal commerce any where, any way

Connected Commerce Goes Beyond Omnichannel

“Omnichannel is dead ... Moving forward, it's all about connected and not connected — not in-store or online.”

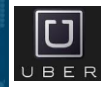
Patrick Gauthier

Amazon VP of Payments¹

Connected Commerce 101

- Not just anyone, but **any thing**
- Not just channels, commerce **any where** AND in **any way**
- Highly **personalized**
- Largely **invisible, frictionless**
- Has **multiple modes** of interaction (personal device, voice, autonomous)
- Still in its **infancy**

Early Examples



Paying for an Uber ride isn't about asking for the fare total and swiping a card; it's a seamless transaction via mobile device.



At Disney World, parents don't need to remember tickets, passes, or credit cards; it's all embedded in their wearable bands.



Amazon's Alexa personal assistant uses voice to share information, select music, control the home, and power commerce.



Ford is investing billions to make their future cars a commerce platform; it will buy gas, food, parking, etc.



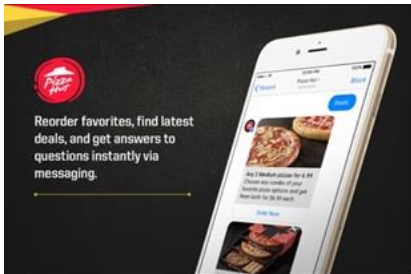
Starbucks targets its customers with hyper-personalized offers based on purchase history, weather, and app usage.

Sources: (1) "Amazon on Why Personal Commerce is the Next Big Thing", Pymnts.com, April 2016. Company websites.

Connected Commerce: Bots!

Facebook and its evolution as a commerce platform drives citizen expectations for similar services

Merchants are building Facebook bots!



- For customer service and ordering
- Payment credentials can be used across the platform
- Consumers can access businesses' mobile websites within Messenger

Why it could succeed

- 1B+ consumers on the platform²
- Meaningful developer engagement (30K+ bots on the platform)²
- Addresses growing reports of app fatigue
- Successful case study in WeChat

Why it could struggle

- Entirely new form factor for U.S. consumers
- Consumers still have to upload their cards
- The technology powering bots is still evolving
- P2P uptake in Messenger has been limited

Sources: (1) "Pizza Hut and Whole Foods Debut Social Media Chatbots", Engadget, July 2016, (2) Facebook earnings call, November 2016.

Connected Commerce: FDC's Outlook

Continued expansion into new experiences

Merchants Lead the Way

Merchants will play a key role in **crafting connected commerce experiences** – QSR, personal services, gig economy, and even retailing are prime candidates

Personalization

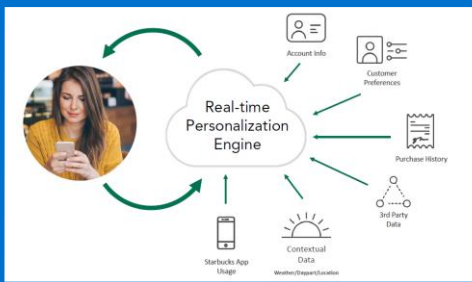
Leaders such as Starbucks will focus on **personalization as a key differentiator** in their connected commerce experience

Platform Expansion

Amazon, Apple, and Google will partner with developers and merchants to put **their platforms at the heart of these connected commerce experiences**

Piloting the Connected Car

Auto manufacturers will be **full-speed** ahead with the enablement of their platforms; those not in the game today will soon announce their intentions



Source: FDC Strategy

A low-angle photograph of a modern bank building facade. The words "THE BANK OF" are visible in large, raised, metallic letters on a dark grey panel. A blue semi-transparent banner is overlaid across the middle of the image.

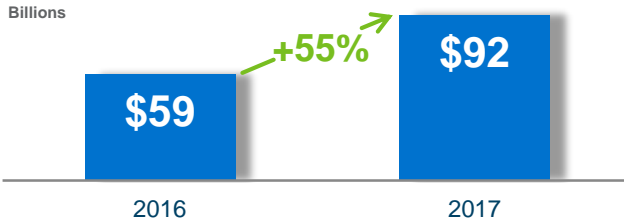
Part 2: Banks

P2P Payments

Can Government cash benefits arrive via P2P?

U.S. mobile P2P payments volume growth will likely remain strong

Nearly one-third of U.S. adult smartphone users will use P2P at least monthly in 2017¹



Sending money will likely be the primary use case; purchasing will be evolutionary

Most common Venmo transactions²



FINTECH

VS

BANKS

venmo **PayPal** **Square Cash** **f** **👤**

- Social engagement features
- Millennial attraction – “Venmo me”³
- Integrates with contacts on mobile devices and social networks i.e. Facebook



- Privacy and security concerns
- Speed i.e. next-day payment

zelle **Bank of America** **CHASE** **citi** **FIS** **fiserv.** **WELLS FARGO** **PNC** **13+ Other Bank Partners**





- Close attachment to customer funds
- Comfort in stability and security of customer’s bank
- 20+ FIs connected to 100M accounts today⁴

- Consumer switching costs to another app
- Potential lack of cohesive experience and branding across all banks³
- Regulatory constraints – social / transaction details

Sources: (1) “US Mobile Payments Outlook”, eMarketer, 2016; (2) “Why would anyone in her right mind use Venmo?”, The Washington Post, 2015; (3) “Is Zelle the De Facto P2P Solution in the U.S.?”, Mercator, 2016. (4) Company websites

Faster Payments

First Data Government Tax Payment Solutions are adding same day ACH to State clients

	The Players	The Developments	FDC Outlook
Same Day ACH		<ul style="list-style-type: none"> • Same Day credit ACH launched in September 2016¹ • Transactions ramping at expected clip; \$5B and 4M transactions in Oct² • 95% of top FIs expressed intent to participate³ • FDC StateEFT® support 	<ul style="list-style-type: none"> • Phase 2 launches in Sept 2017 for Same Day Debit¹ • Will focus on consumer-to-business (billers) • Work through growing pains (e.g., combating fraud, increasing security) • Solve for new use cases
Real-Time Payments		<ul style="list-style-type: none"> • The Clearing House is leading an effort to develop an all-new real-time solution • Core systems providers have partnered with TCH⁴ • Alternative solutions also announced by MasterCard, Wells Fargo⁵ 	<ul style="list-style-type: none"> • TCH's initial RTP launch estimated for Q2⁴ • Early pilots could focus on consumer use cases, including bill pay • Accelerating competition from tech-led solutions including Venmo, Square Cash, etc.

Faster payments is happening and will take hold in 2017

Source: (1) NACHA Resource Center web site; (2) "\$5 Billion – Not Bad for a (Same) Day's Work", BigFinTechMedia, November 2016; (3) NACHA, "Nation's Financial Institutions On Target To Offer Same Day ACH Payments In 2016", April 2016; (4) TCH web site; (5) Pymnts.com, "Mastercard, Wells Fargo Launch Mastercard Send", December 2016

The Evolution of Blockchain and Distributed Ledgers

Big-name companies continue to invest, but the future of the technology is not clear

Major banks and securities exchanges are experimenting with blockchain technology

14 of the Top 30 Global Banks¹



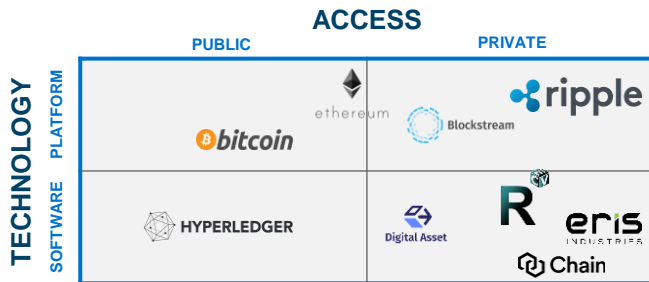
Representative Companies

21 of 63 Global Securities Exchanges¹



Representative Companies

But technology standards are far from coalescing, and interoperability is not guaranteed



- Goldman Sachs and Santander pulled out of the R3 consortium due to disagreements over direction²
- Changing the public blockchain standard requires mass consensus from developers and users, which has spawned more flexible private blockchain models³
- The hype is cooling, and some experts now believe financial institutions may stick with non-blockchain technology for internal uses⁴

Sources: (1) CoinDesk "State of Blockchain Q3 2016"; (2) Fortune, "Why Goldman Sachs and Santander Are Bailing on R3's Blockchain Group," November 22, 2016; (3) Bloomberg News, "Man Who Introduced Millions to Bitcoin Says Blockchain Is a Bust," August 18, 2016; (4) Fortune, "Why Blockchain Fails—and When It Will Succeed," November 3, 2016.

Paper Checks are still coming – Remittance Processing

Government clients contract with Bank Partners or Direct with First Data



GREATER SCALE

419 Million

Payments processed annually through our national network

34 Million

Remittance payments monthly



BROADER EXPERIENCE

25 Years

Experience in lockbox processing

3,400

Remittance processing lockboxes across various industries



DEEPER COVERAGE

8 processing sites

- Charlotte, NC,
- Chicago, IL,
- Atlanta, GA,
- Dallas, TX,
- Philadelphia, PA,
- Los Angeles, CA,
- Newark, DE
- Staten Island, NY

- Economies of scale
- Any range of volumes
- Remote Deposit Capture
- 100% conversion to image
- Image archive capabilities
- Able to replace paper payments with array of electronic payment options





C  A L F I R E [®]

E-COMMERCE AND PCI COMPLIANCE

Jon Bonham CISA, QSA

Director, Enterprise Risk and Compliance

AGENDA

- **About The Speaker**
- **About Coalfire**
- **E-Commerce**
 - The Good - the benefits
 - The Bad - what could go wrong
 - The Ugly- how to truly mess it up
- **Questions and Answers**

ABOUT THE SPEAKER

- **Jon Bonham – CISA, QSA**
- **Director of ERC with Coalfire Systems**
- **Has been working with Enterprise clients for eight years**
- **Has worked with Enterprise customers from coast to coast**

ABOUT COALFIRE

- **QSA for the state of North Carolina**
- **Agencies, Departments, Colleges and Universities are all set up on Coalfire's Coalfire One platform for scans and SAQs.**
- **Coalfire has a division set up just to handle state and local government as well as higher education and large diverse hospital systems.**

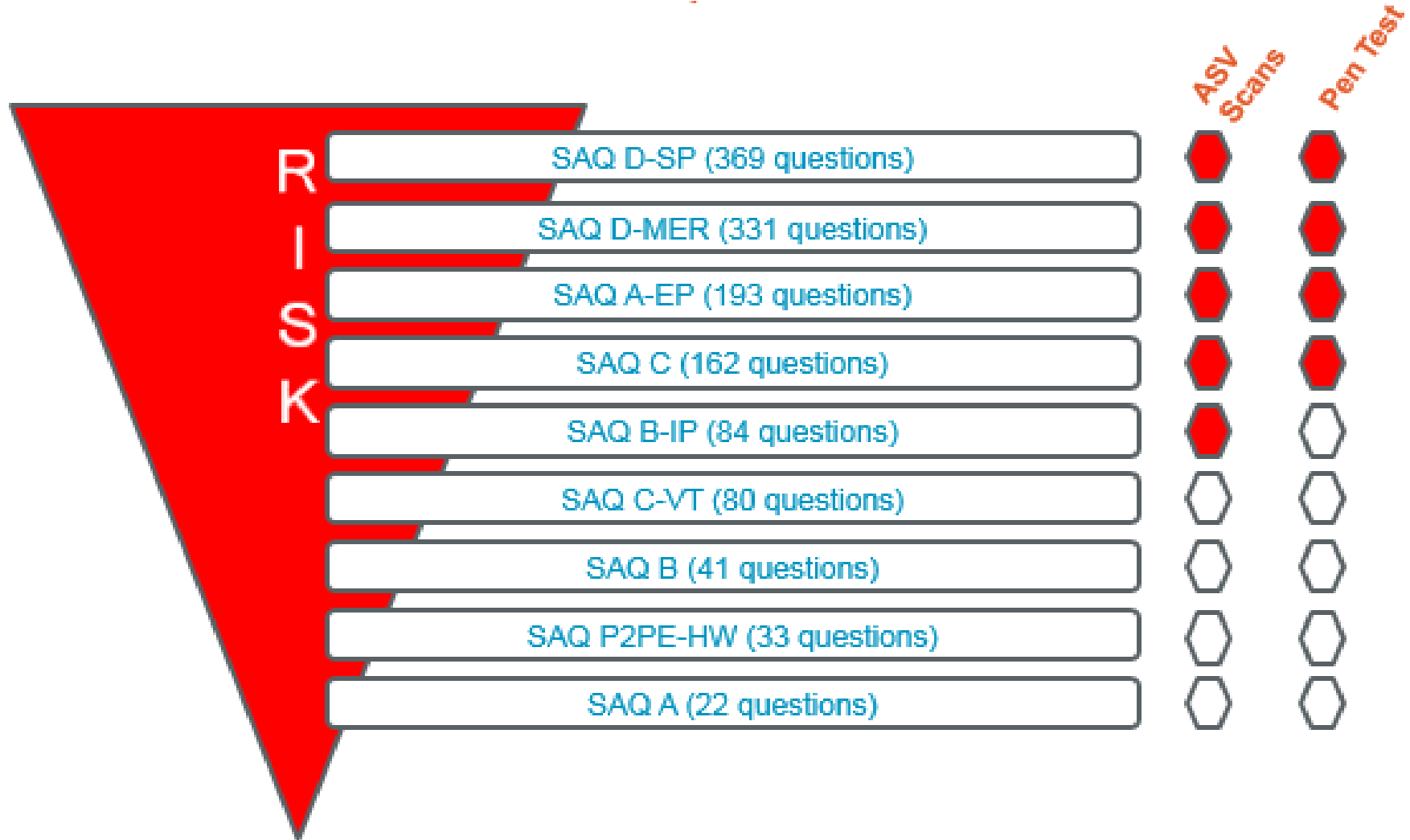
ABOUT COALFIRE

- **Coalfire is a leader in PCI, HIPAA, FERPA, FISMA, GLBA and Personal information auditing and assessments.**
- **Has been around since before PCI was started. Was part of the Visa and MasterCard security programs prior to PCI.**
- **Independent: Coalfire doesn't provide managed services to their customers.**
- **Coalfire is vendor agnostic so they don't care who you use for any hardware, software, managed services or card processing. They work for their customers as a trusted partner and advisor.**

PRODUCTS, SERVICES OR FEES



RISK AND REQUIREMENTS



SAQ Validation Type	Description	# of Questions v3.0	ASV Scan Required v3.0	Penetration Test Required V3.0
A	Card-not-present merchants: All payment processing functions fully outsourced, no electronic cardholder data storage	24	No	No
A-EP	E-commerce merchants re-directing to a third-party website for payment processing, no electronic cardholder data storage	139	Yes	Yes
B	Merchants with only imprint machines or only standalone dial-out payment terminals: No e-commerce or electronic cardholder data storage	41	No	No
B-IP	Merchants with standalone, IP-connected payment terminals: No e-commerce or electronic cardholder data storage	83	Yes	No
C	Merchants with payment application systems connected to the Internet: No e-commerce or electronic cardholder data storage	139	Yes	Yes
C-VT	Merchants with web-based virtual payment terminals: No e-commerce or electronic cardholder data storage	73	No	No
D-MER	All other SAQ-eligible merchants	326	Yes	Yes
D-SP	SAQ-eligible service providers	347	Yes	Yes
P2PE	Hardware payment terminals in a validated PCI P2PE solution only: No e-commerce or electronic cardholder data storage	35	No	No

NEW REQUIREMENTS IN SAQ - A

If you do send people from your web site to a third party processor to process the credit cards then all credit card information should be typed into the processors web site.

**The web server that hosts your web page has been brought into scope with the latest PCI Data Security Standard (DSS) and all factory settings must be changed, All unnecessary default accounts removed or disabled before installing a system on the network.
PCI-DSS Req 2.1a and 2.1b**

THE GOOD

- **24 control questions to prove compliance**
- **No scans required**
- **No penetration testing required**

WHAT HAPPENS WHEN THE RULES CHANGE?



WINGING IT



THE BAD

- **It doesn't mean the people are bad. They may just need better policies and procedures or better training.**
- **Many are just trying to help.**
 - **Typing the information into the web site for the customer.**
 - **Setting up workstations for the customers to type it in themselves.**
 - **Directing customers to places to process online.**
 - **Employees aren't well trained on credit card security.**

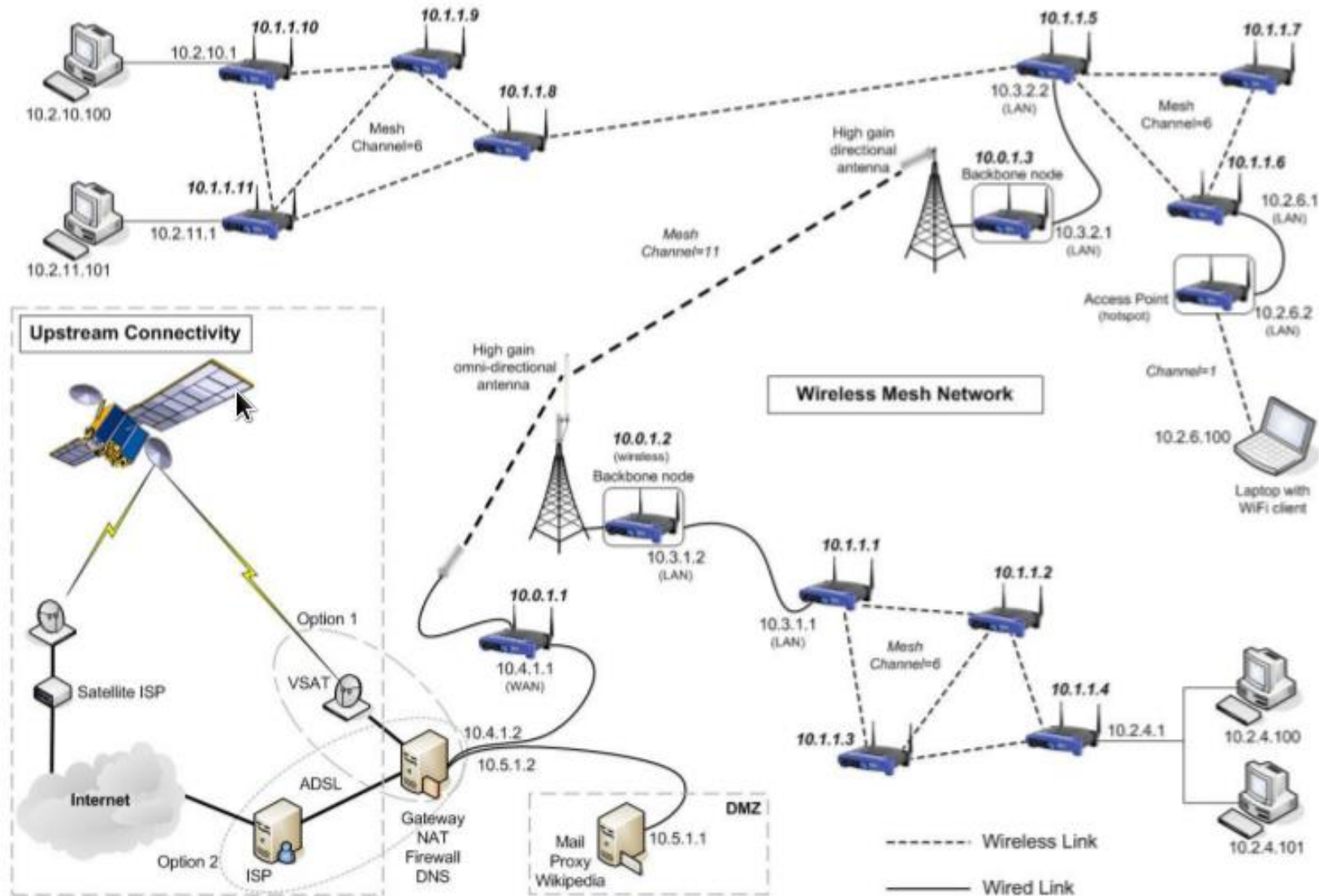
THE UGLY



WHIZ KIDS



PAYMENT FLOW



PAYMENT APPLICATIONS

2006 PA-BP

- Payment applications must be reviewed by QSA for vulnerabilities.

2008 PA-DSS

- PA-DSS mandated

DEVELOPING YOUR OWN CODE

6.4

Follow change control processes and procedures for all changes to system components.

6.5

Prevent common coding vulnerabilities in software development processes by training developers in secure coding techniques and developing applications based on secure coding guidelines – including how sensitive data is handled in memory.

6.6

Ensure all public-facing web applications are protected against known attacks, either by performing application vulnerability assessment at least annually and after any changes, or by installing an automated technical solution that detects and prevents web-based attacks (for example, a web-application firewall) in front of public-facing web applications, to continually check all traffic.

SAQ Validation Type	Description	# of Questions v3.0	ASV Scan Required v3.0	Penetration Test Required V3.0
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REQUIREMENT 12.8

Req. 12.8

Are policies and procedures maintained and implemented to manage service providers with whom cardholder data is shared, or that could affect the security of cardholder data as follows:

Req. 12.8.1

Is a list of service providers maintained?

REQUIREMENT 12.8

Req. 12.8.2

Is a written agreement maintained that includes an acknowledgement that the service providers are responsible for the security of cardholder data the service providers possess or otherwise store, process, or transmit on behalf of the customer, or to the extent that they could impact the security of the customer's cardholder data environment?

REQUIREMENT 12.8

Req. 12.8.3

Is there an established process for engaging service providers, including proper due diligence prior to engagement?

Req. 12.8.4

Is a program maintained to monitor service providers' PCI DSS compliance status at least annually?

YOU DON'T KNOW WHAT YOU DON'T KNOW

Manage by walking around and asking questions. Find out what people are actually doing and not just what you think they are doing.



Don't get stung.

QUESTIONS



Jon Bonham CISA, QSA
Jbonham@coalfire.com

SQUARE OR SIMILAR DEVICES



2017 OSC eCommerce Conference

April 19, 2017

Core and Emerging Payment Technologies

Where Will They Fit in the Corporate Payments Spectrum?

Everette Glass

Director , Complex Digital Payment Solutions



Topics to be discussed:

- Macro trends driving global payments innovation
- The regulatory forces shaping ‘faster payments’
- The rise of digital payments
- Exploring new models for global payments – blockchain



Innovation is being driven by three global megatrends...



1 DEMOGRAPHIC SHIFTS

The rise of millennials is shaping the future of financial services.



2 GLOBALIZATION

Global population growth will offer new business opportunities.



3 GLOBAL CROSS-BORDER COMMERCE

Ease between buyer and seller is driving cross-border growth.

#1 Demographic Shifts

By 2025, millennials will account for 75% of the global workforce – driving expectations

Millennials are the demographic cohort born post-1980

- Fast-paced, technology-enabled lifestyle and how they demand products instantaneously
- Excited by change and innovation

Embracing 'New'

- 73% excited about a new offering in financial services from Amazon, Apple, etc
- The sharing economy fits with millennials' social values
- The US "sharing economy" is estimated at \$450 billion

Always Connected

- Globally, millennials spend an average of 6 hours online every day
- Global increase in number of devices connected to the internet (estimated 50bn devices by 2020)
- Millennials are 2.5x more likely to be an early adopter of tech than older generations



THE MILLENNIAL STATE OF MIND



#2 Globalization:

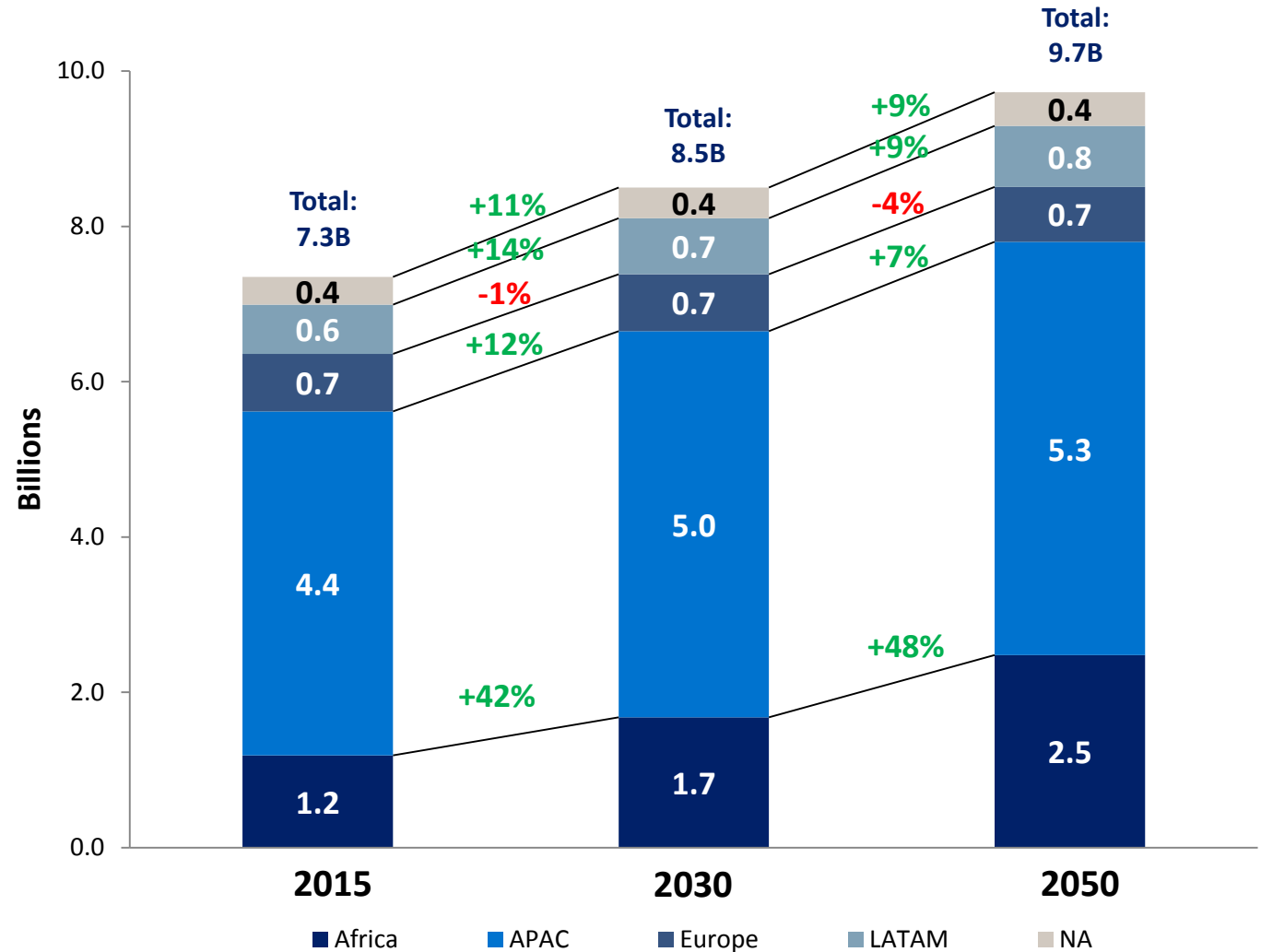
Population growth will drive business expansion into more local economies

The Global Population in 2050:

Global population will grow by **33%**

Europe will lose nearly a **third** of its global population market share

Africa & APAC are responsible for nearly **91%** of the growth

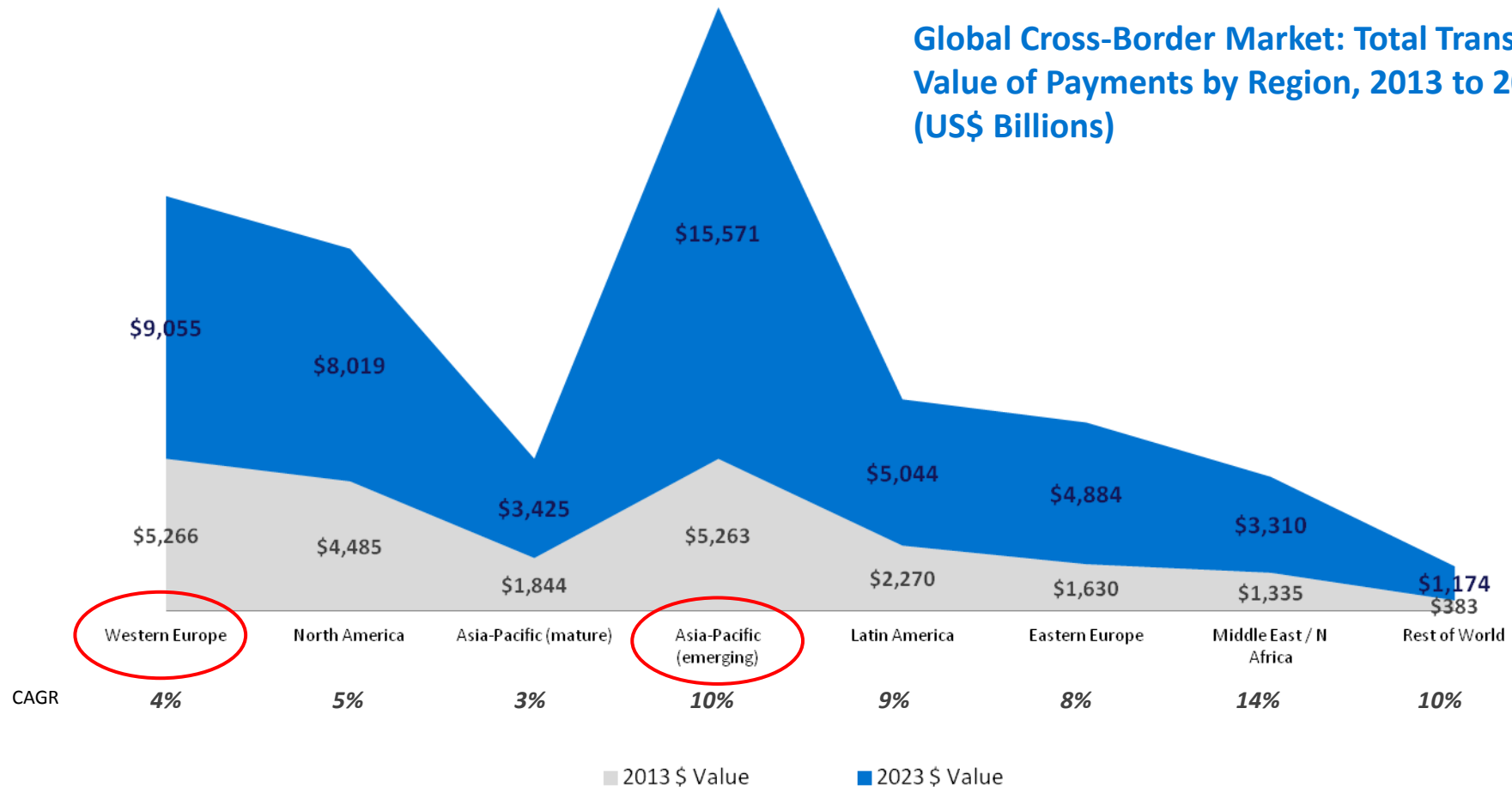


Source: World Population Prospects, UN; Goldman Sachs Equity Research; BCG

#3 Global Cross-border Commerce:

Increasing **global currency flows** will exacerbate weaknesses in correspondent banking

Global Cross-Border Market: Total Transaction Value of Payments by Region, 2013 to 2023 (US\$ Billions)

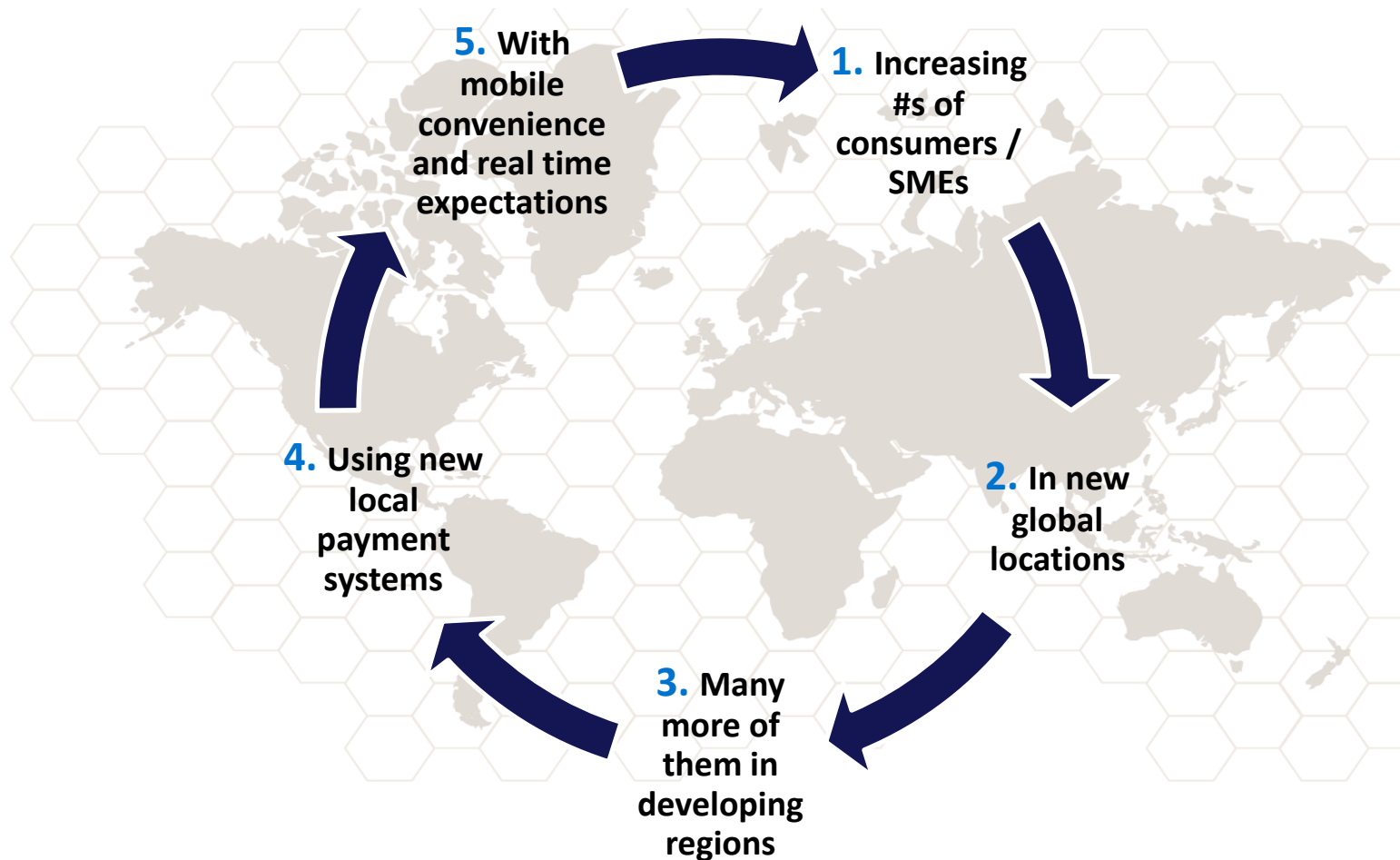


Source: BCG Global Payments 2014 Report

Western Europe and emerging APAC will lead global growth in cross-border payment volumes

Business context driving change in payments...

Today we have...



Leading to rapidly increasing volumes of global low value payments. **Challenging this is the inadequacy of the correspondent banking system to support**

How governments and fintechs are responding

Driving the expansion of newer, faster payments in real-time

no real-time payment system

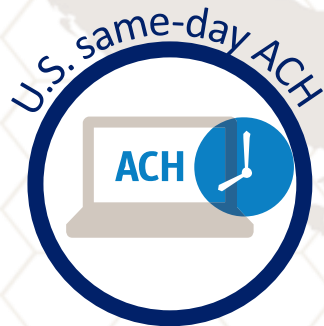
Federal Reserve

Jan. 2015



U.S.

Specific requirements defined....



government mandate

success



Mexico
Japan



19

COUNTRIES

Real-time payment systems

Status of payments infrastructure modernizing

XX%

Indicates percentage, global credit transfer flows covered

Exploratory phase

2%

Canada
Kazakhstan

Indonesia
Thailand

Design phase

42%

Netherlands
Norway
Colombia
Spain

U.S.
Finland
EU

Build phase

2%

Australia
Saudi Arabia

Live

45%

Bahrain
Brazil
Chile
China
Denmark

Iceland
India
Japan
Mexico
Nigeria

Poland
Singapore
South Africa
South Korea
Sweden

Switzerland
Taiwan
Turkey
UK

'Faster' Payments in the US: A unique collection of competing entities racing to gain ubiquity...

Leading FI Endorsed Solutions:



National bank-owned payments company that is a major competitor to The Fed in providing payments services: check and imaging-clearing, ACH processing and wire transfer processing

- The Clearing House real-time system will be designed to address unmet customer needs across a number of targeted use cases: B2P; P2P; P2B; B2B
- Requires a significant member investments to build a new real-time payment network



Early Warning provides risk management solutions to financial institutions, government entities and payment companies, enabling businesses and consumers to transact with security and convenience.

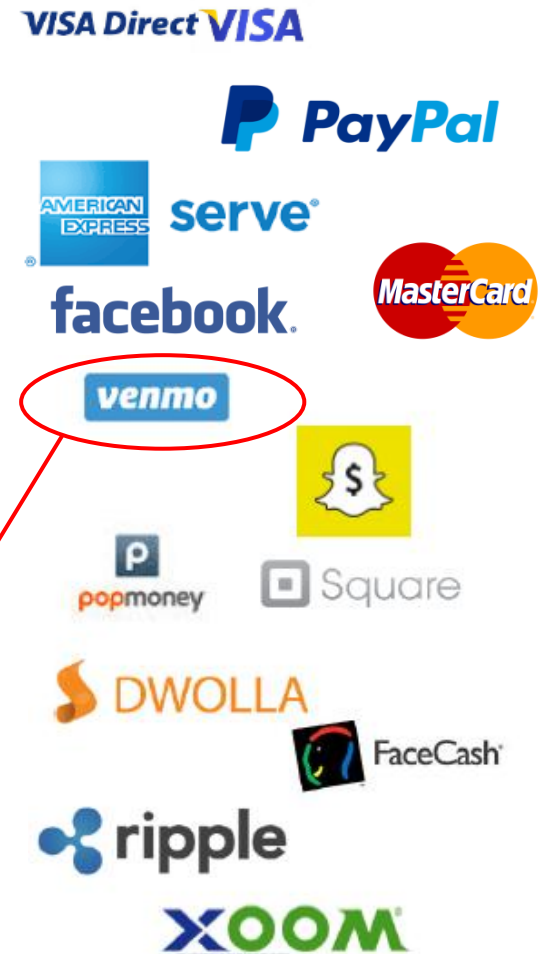
- Owned by Bank of America, BB&T, Capital One, JPMorgan Chase, U.S. Bank, and Wells Fargo
- October 26th, 2015 - Early Warning acquires ClearXChange
- Rebrands to **ZELLE**.



Non-profit association that oversees the ACH network with a primary role in rule-making. It is not involved in the processing of payments. It tests new product enhancements but does not develop them like card networks

- Through a 3-phased approach, NACHA seeks to move the ACH Network from today's single, next-day settlement to multiple, same-day and next-day settlement options for ACH transactions


Non-Bank Solutions:













- "VENMO ME" money
- \$54 MM/day vs \$175MM/day
- 17% of the total P2P volume
- avg non-bank pymt: \$135
- most common emoji: pizza and beer

RTP Development in the US: The Clearing House

- The Clearing House (TCH) is implementing the first **new payments rail** in the United States in 40 years, with the goal of making payments not only faster but safer as well
- RTP will be available to all US financial institutions; the goal is to make it ubiquitous
- TCH aims to have the new rail ready for operation by the end of 1Q17
- The system aligns with the CFPB's consumer protection principles and the criteria set forth by the Federal Reserve's Faster Payments Task Force



RTP System Characteristics and Requirements*

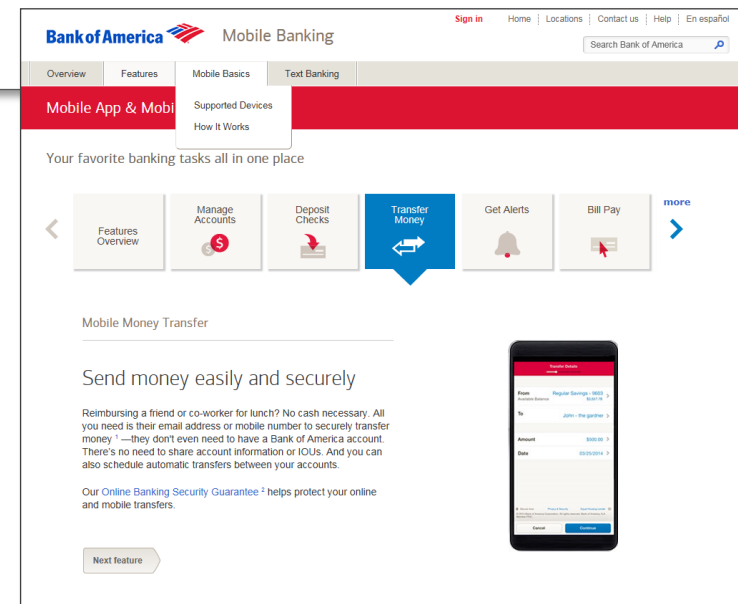
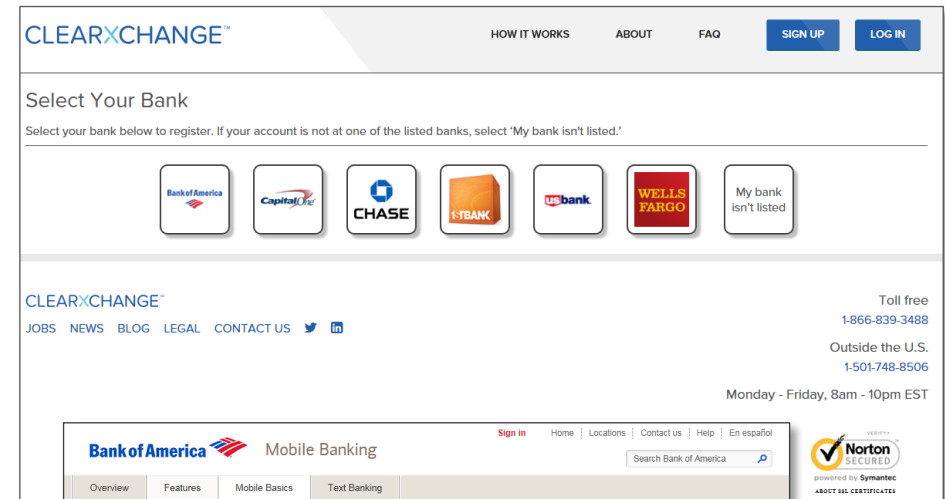
 <p>Immediate Availability – Payment will be received within seconds of the Sender initiating the transaction, with immediate funds availability (subject to applicable Regulations and risk management processes.)</p>	 <p>Payment Certainty – Senders will not have the Capability of revoking or recalling a payment once it has been submitted to the RTP system.</p>
 <p>24/7/365 – No down time and users will have the capability of sending or receiving payments at any time.</p>	 <p>Convenience – Users will have access to directory services which allow senders to locate alias or routing and account information of their receiver. (TCH delivery TBD)</p>
 <p>Extensibility – Functionality beyond the basic payments to support value-added products through rich, flexible messaging.</p>	 <p>Account Data Privacy – The system will use static tokens to encrypt recipient account information. (TCH's delivery TBD)</p>
 <p>Adaptability – Flexible architecture to adapt to changing market needs.</p>	 <p>Cash Flow Control – The ability to send and receive payments immediately will give customers more control over cash flows.</p>
 <p>Reach – Accessible by all financial institutions and will reach the vast majority of U.S. account holders.</p>	 <p>Global Standards – Consistency with international global standards and formats.</p>

*See Appendix for details on the TCH RTP Operating Rules

EarlyWarning and clearXchange (Zelle)

Supporting P2P transfers since 2011 Now used for B2C payments

- The first U.S. P2P payment network created by financial institutions for financial institutions
- clearXchange members reach over 60% of all U.S. online and mobile banking customers
- Now includes 5 of the largest banks in the United States, serving over 130 million customers
- Early Warning purchased clearXchange in January 2016
- Transactions settling with certain participating clearXchange member banks are now real time
- Rebrand to Zelle in summer of 2017



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What's new?

A new rule:

Banks must make same day ACH transactions available by the times stated in the Rule

A new opportunity:

Offer optional same day ACH origination service with same day settlement for on-us and off-us

A new option:

Clients choose same day or future dated settlement

NACHA Same Day ACH Rule

Phase 1	9/23/2016	Credits
Phase 2	9/15/2017	Credits and Debits
Phase 3	3/16/2018	Memo Post Availability by 5pm local

* Ineligible: International transactions (IATs) and transactions greater than \$25k

US Payments Comparison...

Future Capabilities

Payment Feature		US ACH (NACHA / EPN)	US Wire (CHIPS & FedWire)	Card Payments	US Same Day ACH (NACHA)	US RTP (TCH)
Core Capabilities	Payment Initiation	Credit Push & Debit Pull	Credit Push & Debit Pull	Credit Push & Debit Pull	Credit Push & Debit Pull	Credit Push & Request for Payment
	Bene Funds Availability	Next day	Minutes	Within 30 min	5pm (EOD)	Seconds
	Payment Value	Primarily Low value	Primarily High Value	\$10K (Max)	\$25K (max)	\$25K (max)
	Irrevocability	No	Yes	No	No	Yes
	Domestic / International	US	US/International	US	US	US initially / International capability*
Operating Model	Economic Sanctions Screening	Exempt	Required	Exempt	Exempt	Potentially Required by Clearing
	Messaging Protocol	NACHA	CHIPS / FedWire	Visa/MasterCard	NACHA	ISO 20022 XML
	Clearing Timeframe	EOD cutoff	Mandate - EOD Client Experience- Minutes	Visa – Daily batch at 12:30 EST MasterCard – 4x daily	Intraday Cutoff	< 30 seconds
	Clearing Availability	Business days Cutoff - 1:30 ET	Business days Cutoff – 18:30 Local Time	24x7x365 (incl. Holidays & Weekends)	Business days Cutoff – 1:30 ET	24x7x365 (incl. Holidays & Weekends)
	End- User Notification	Optional	Optional	Optional	Optional	Required
Settlement Details	Settlement Frequency	Next Day	Real Time	Daily at 6 AM EST	Multiple times a day	Multiple times a day
	Settlement Mechanism	Multilateral Deferred Net	Gross/Net	Net	Multilateral Deferred Net	Prefunded, Multilateral Deferred Net, Debit Cap
	Settlement Risk (Credit / Liquidity Risk)	High (Low Value)	Low	Low	Medium (Low Value)	Low

Everyone is connected – digital ubiquity...



Mobile phones are the world's first truly ubiquitous technology

Global Mobile Phone Users

1995 | 80M – 1% Population Penetration

2014 | 5.2B – 73% Population Penetration



The internet provides a interconnected method of communication

Global Internet Users

1995 | 35M – 0.6% Population Penetration

2014 | 2.8B – 39% Population Penetration



Digital technology has created instant communication, driving real-time expectations

Alias-based platforms enable global payments

Alias-based payment systems allow the transfer of funds using just an email or phone number

Alias-based Payments



The growth of these alias-based payment networks has brought millions into the formal economy



PayPal users have more than doubled from 84.1MM in Q1 2010 to **184MM** Q1 2016¹



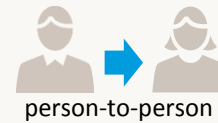
More than half of China's internet users (688MM¹) are Alipay users (400MM²)



In 2013, a staggering 43% of Kenya's GDP flowed through M-Pesa, with over 237 MM person-to-person transactions³

Alias-based payments are being used for:

P2P



- Paying the babysitter
- Reimbursing for your share of the dinner check

C2B



- EBay checkout with PayPal
- Use the Starbucks® tap & pay app (Mobile Order & Pay) for your morning latte

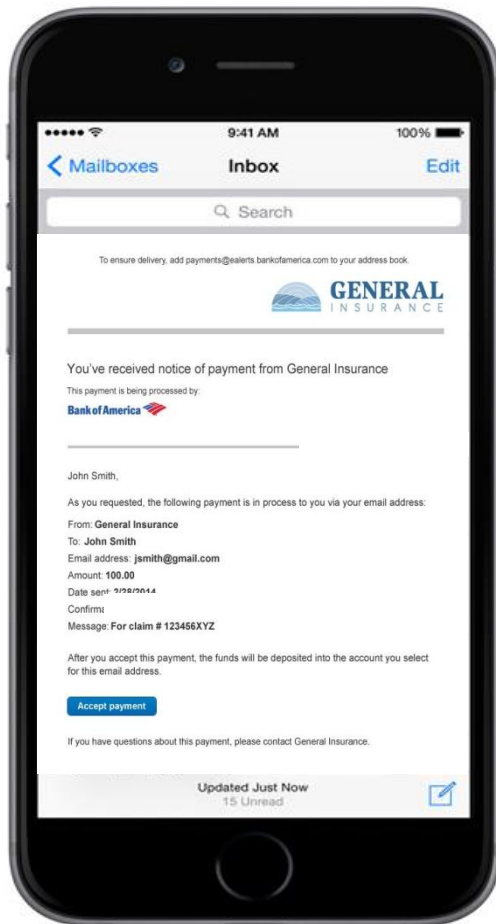
B2C



- Refunds or claim payments
- Employee or recruitment reimbursements

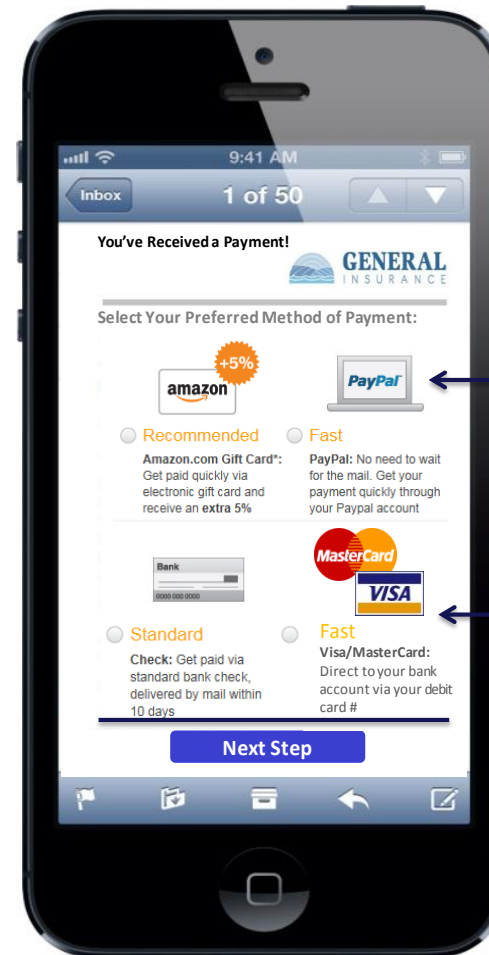
Alias-Based Payments Solution – Real/Conceptual

Digital Disbursements v 1.0



- Replace checks
- To anyone with a US bank account
- Using email address or cell phone number
- Don't need to store personal account information

Near Future Payments v 2.0



Alias Network would change by region

Additional payment types, ClearXChange, ACH, etc.

- Customizable payment options
- Ability to integrate regional specific solutions
- A single platform to enable multi-party connectivity to BofAML

Business to Consumer payments

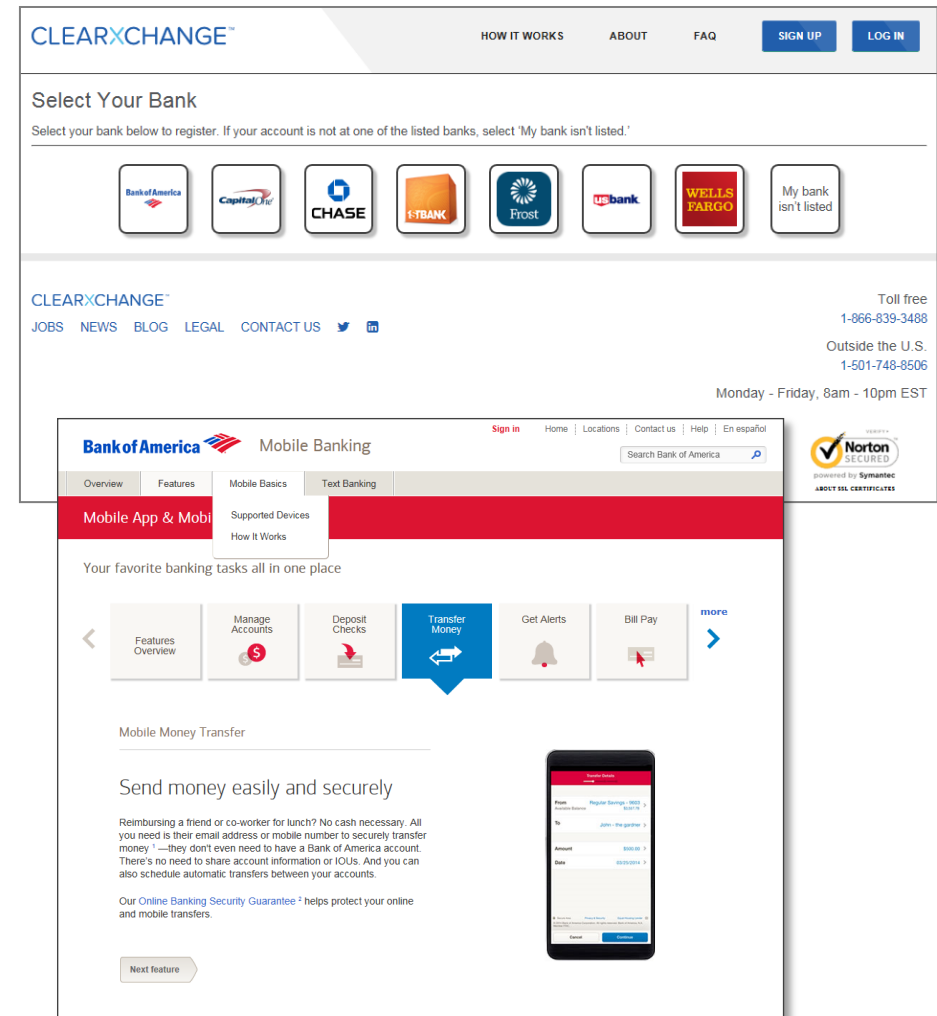
Alias-based payment



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It's time to rethink your payment process

Distribute funds
without paper

Recipients receive payments
more quickly

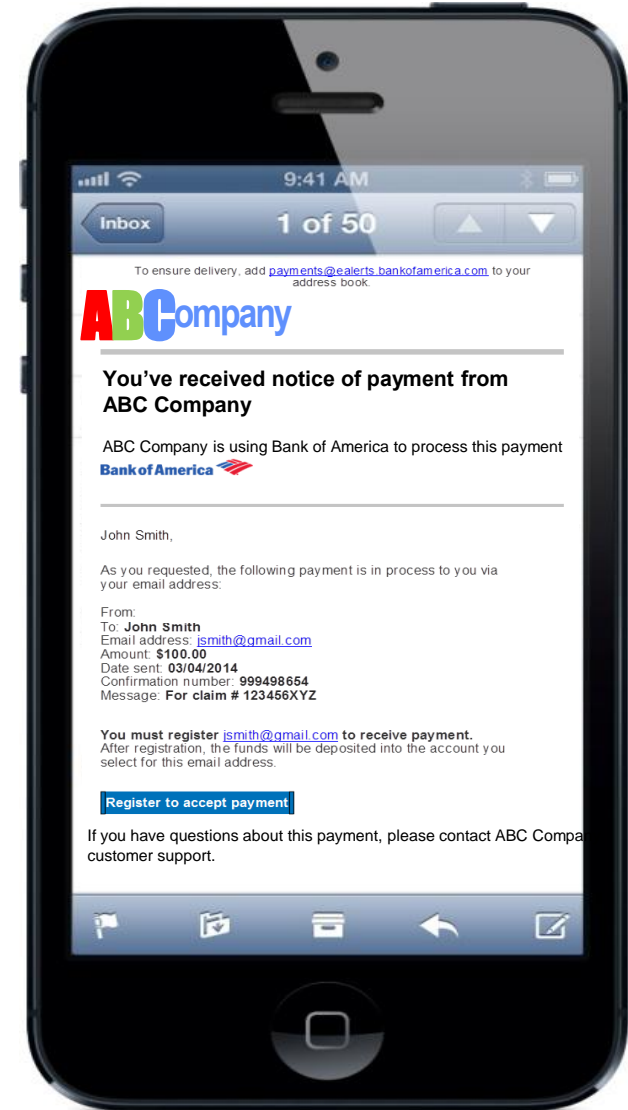
To anyone with a
U.S. bank account

Higher customer satisfaction

Using mobile phone
number or email
address

Potentially reduce payment
expenses

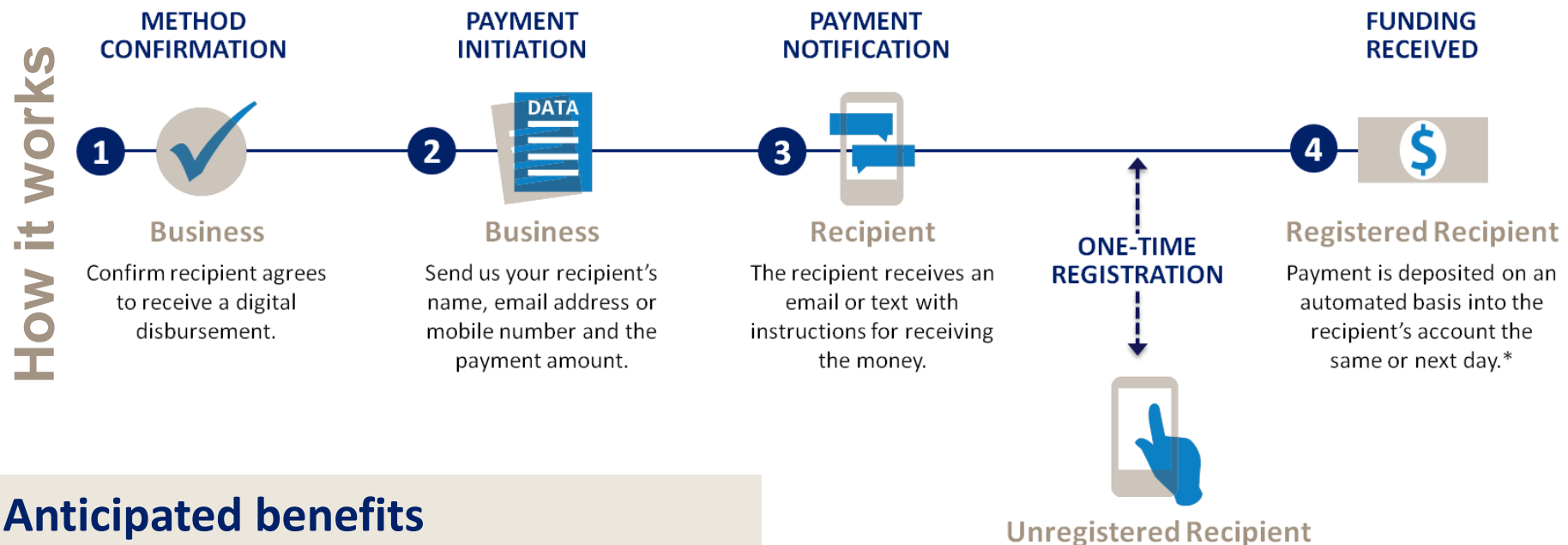
No need to obtain sensitive
bank account information



New B2C payment solution: Digital Disbursements

Delight your customers by providing:

- Faster payment—funds are deposited directly into their account
- Convenience—mobile technology is easy to use and available almost anywhere
- Privacy—no need to share sensitive bank account information



Anticipated benefits

- Replaces high cost check payments
- Reduces risk—eliminates the need to store and maintain your consumers' bank account information
- Reduces fraud and escheatment issues related to check payments (**reminders and 14 days to register**)
- Promotes your brand as being customer-centric and innovative

3 ways to register

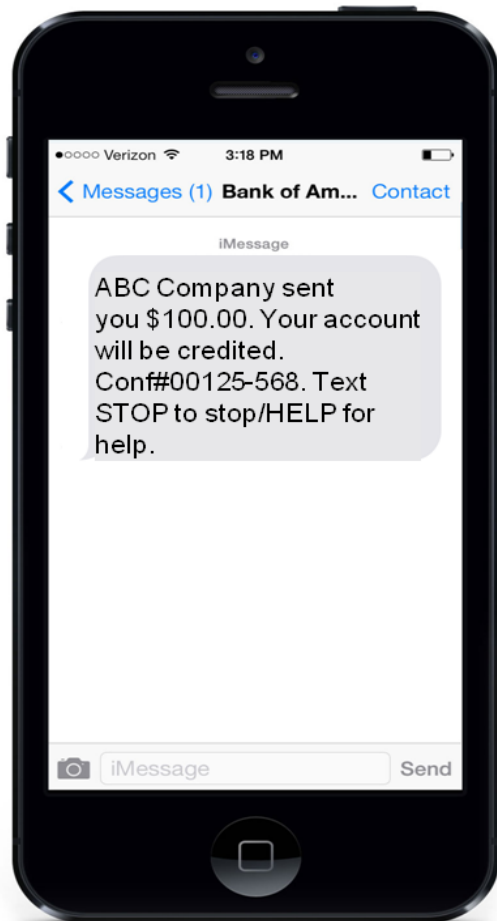
1. Member bank
2. Pre-registration
3. Payment notification

* Please note: Refers to period of time during which payments are generally available. Depending on the receiving bank and time of day, payments could be received same day or next business day. Actual times may vary.

Payment Notification

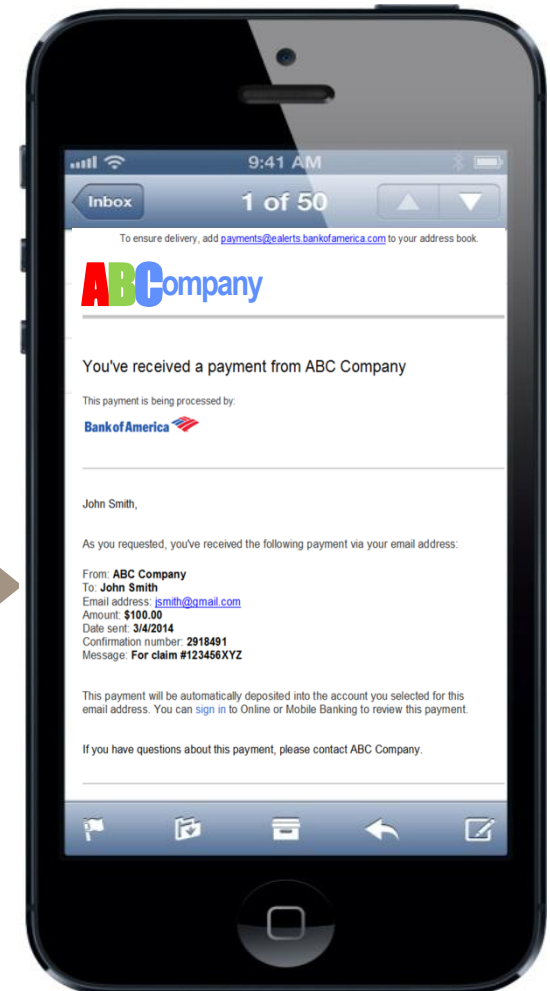
Registered recipient

Registered recipients receive notification from their bank or clearXchange and the funds are deposited same or next business day.*



By text if
using mobile
number

By email
message if
using email



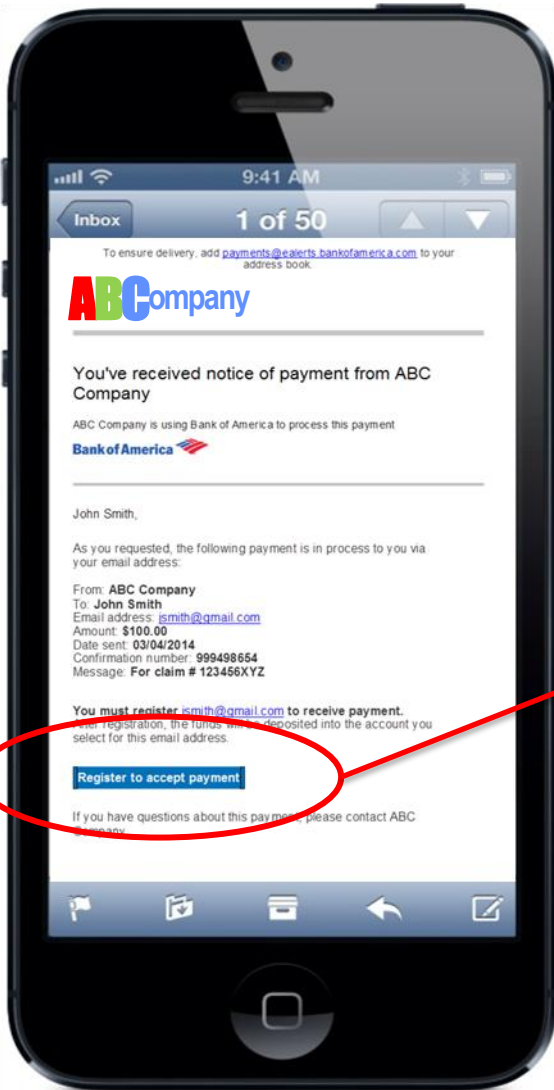
* Please note: Refers to period of time during which payments are generally available. Depending on the receiving bank and time of day, payments could be received same day or next business day. Actual times may vary.

Payment Notification

Unregistered email recipient

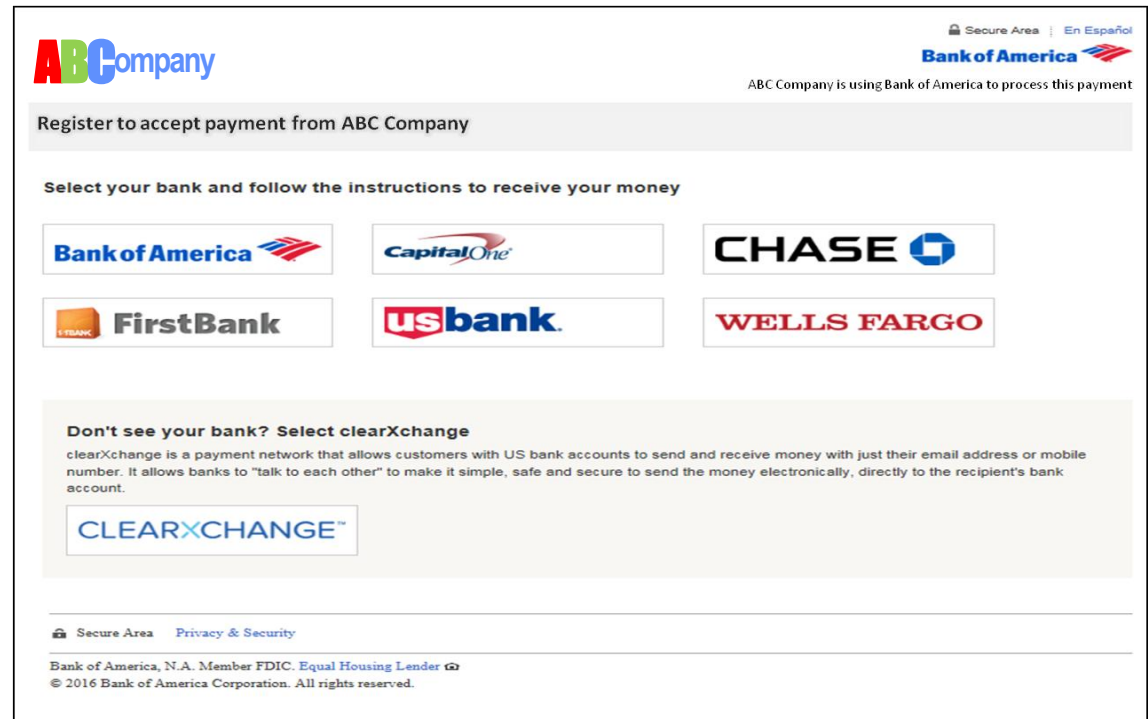
1

Unregistered recipients receive notification of funds with a call-to-action to enroll to accept the funds.



2

After choosing their bank to enroll in the service, they are able to accept funds.



New Models for Global Payments- Blockchain



A blockchain is a cryptographic, or encoded, ledger comprising a digital log of transactions shared across a public or private network*



How does Blockchain work?

Five basic principles:

- Distributed database
- Peer-to-Peer transmission
- Transparency with Pseudonymity
- Irreversibility of Records
- Computational Logic



Roadblocks?

- ✓ Regulation
- ✓ Foundational technology that will take years to develop (80% of banks are exploring)
- ✓ Novelty vs complexity

Applications?

- ✓ Smart contracts
- ✓ Track items through complex supply chains

Industry Progression



GTS Focus Areas

Participation...

Consortium Membership



Sounding board and industry consortium for 42 banks to discuss critical topics

Strategy

- Participate in working groups
 - SteerCo
 - Technology and Architecture
 - Legal and Regulatory
- Join PoC if appropriate use cases form
 - Trade Finance
 - Cross Currency Payments

Investigation...

NextGen Cross Currency Payments



Cross-border transactions of fiat currencies using blockchain technology



Client Benefits

- Reduced uncertainty over timing and amount of delivery and increased transaction visibility
- Reduced costs



Bank Benefits

- Improved information and efficiency
- Reduced Costs
- Increased FX revenue

Experimentation....

Digital Trade Finance

Letter of Credit issuance/advising on blockchain



Client Benefits

- Standardization of forms and data fields
- Reduced costs in handling paper LC applications
- Increased productivity from STP
- LC status between banks and importer



Bank Benefits

- Reduction in cost to handle volumes of paper LC applications for issuing banks and improved STP

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NORTH CAROLINA OSC E-COMMERCE CONFERENCE & AMERICAN EXPRESS

Presented by: Andry Llovera



AMERICAN EXPRESS
GLOBAL SERVICING NETWORK



WHAT WE'LL COVER

- OUR DISPUTE PROCESS
- HOW TO HELP PREVENT DISPUTES
- WHAT TO DO WHEN PRESENTED WITH INQUIRIES AND CHARGEBACKS
- EXCITING UPDATES TO OUR POLICY
- QUESTIONS AND ANSWERS

AMERICAN EXPRESS DISPUTES PROCESS

WHAT IS A DISPUTE?

WHEN A CARD MEMBER QUESTIONS SOME ASPECT OF AN ITEM ON THEIR BILLING STATEMENT, HE/SHE DISPUTES THE CHARGE.



WHY MIGHT A CARD MEMBER QUESTION THE CHARGE?

- THEY DON'T RECOGNIZE THE CHARGE (FRAUD OR NON-FRAUD)
- THEY DON'T AGREE WITH THE AMOUNT
- THEY WERE CHARGED TWICE
- THEY NEVER RECEIVED THE ITEM
- THE GOODS OR SERVICES ARE NOT AS EXPECTED
- AND MANY MORE

WHAT IS AN INQUIRY?



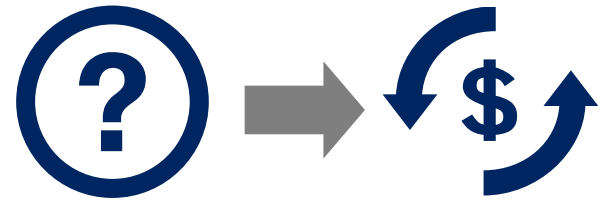
A CUSTOMER INQUIRY IS A NOTIFICATION THAT A CARD MEMBER DISPUTES A CHARGE, AND WE CANNOT RESOLVE IT USING THE DOCUMENTS WE HAVE ON FILE.

WHAT IS A CHARGEBACK?

A CHARGEBACK IS THE AUTOMATIC DEBIT OF FUNDS FROM THE MERCHANT ACCOUNT FOR THE DISPUTED AMOUNT. WE WILL SEND A CHARGEBACK NOTIFICATION FOR REVIEW.



UPFRONT CHARGEBACK



CHARGEBACK AFTER AN INQUIRY

AMERICAN EXPRESS DISPUTE PROCESS



 A CARD MEMBER DISPUTES A CHARGE

 INQUIRY

American Express sends an Inquiry notice

 SUBMIT DOCUMENTS

 20 DAYS TO RESPOND

 CASE RESOLVED

The case may be resolved in your favor if you provide the appropriate supporting documents and information within the 20 day timeframe

 CHARGEBACK

A Chargeback will be processed if: your reply is insufficient; you do not reply on time; or you authorize us

 UPFRONT CHARGEBACK

American Express debits your account and sends you a notice

 SUBMIT DOCUMENTS

 20 DAYS TO RESPOND

 REVERSAL

A Reversal may be processed if you provide the appropriate supporting documents within the 20 day timeframe

 CHARGEBACK STANDS

The Chargeback stands if: your reply is insufficient; or you do not reply on time

HOW TO HELP PREVENT DISPUTES

CLEAR BILLING STATEMENT DETAILS



SET UP A CLEAR STATEMENT DESCRIPTOR
THAT THE CUSTOMER CAN RECOGNIZE

BE SURE TO PROVIDE A CUSTOMER SERVICE
TELEPHONE NUMBER TO APPEAR ON THE
STATEMENT

AT THE TIME OF PURCHASE



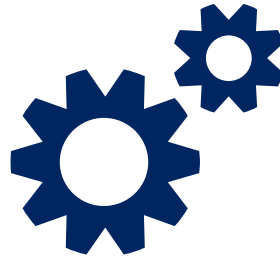
GET A SIGNATURE
FOR ALL CARD
PRESENT
TRANSACTIONS

KEEP A RECORD
OF CONSENT
AND PROOF
OF DELIVERY
FOR CARD NOT-
PRESENT
TRANSACTIONS

PROVIDE WRITTEN
CANCELLATION,
RETURN, REFUND
AND SPECIAL
TERMS POLICIES
AT TIME OF
PURCHASE

NOTIFY CARD
MEMBERS OF
THE EXPECTED
DELIVERY DATE

ADDITIONAL BEST PRACTICES



PROCESS AND
SUBMIT CREDITS
DUE AS SOON AS
POSSIBLE

FOR RECURRING
BILLING ENSURE
ALL PIPELINE AND
FUTURE BILLINGS
ARE CANCELLED
UPON REQUEST

DOCUMENT YOUR
RETURN/REFUNDO
R CANCELLATION
POLICY
ON THE SALES
SLIP OR EMAIL
CONFIRMATION

DO NOT SUBMIT
CHARGES UNTIL
GOODS HAVE
SHIPPED

HOW TO RESPOND TO THE MOST COMMON CHARGEBACKS AND INQUIRIES

HOW TO RESPOND

TO RESPOND TO A DISPUTE OR INFORMATION REQUEST OR APPEAL A CHARGEBACK, RESPOND WITHIN 20 DAYS OF NOTIFICATION WITH SUPPORTING DOCUMENTATION.

CHARGEBACKS

If we charge back your account, for any reason, you can use this section to learn more about what actions you can take.

INQUIRIES

You'll receive an Inquiry notification if a Card Member disputes a charge from your business and we cannot resolve it using the documents we have on file. This is the full list of Inquiry codes paired with suggestions for what kinds of documents you should submit to help avoid a Chargeback. To help avoid a "No reply" or "Insufficient reply" Chargeback, respond within 20 days with the suggested documents.

Code	What It Means	What You Can Do
004	The Card Member has requested the delivery of an item(s) or service(s) that was ordered but not received.	Please provide the service, ship the order, or provide proof of delivery/services rendered.
021	The Card Member claims the item(s)/service(s) was cancelled/returned, or the Card Member has been unsuccessful in an attempt to cancel the item(s)/service(s).	Please issue a credit, or provide a copy of your cancellation policy/contract signed by the Card Member and discontinue future billings.
024	The Card Member claims the order arrived damaged or defective and requests return authorization.	If a return is not permitted, please provide a copy of your return or refund policy.
059	The Card Member has requested the repair or replacement of an order that was damaged or defective.	Please provide return instructions and make the appropriate repairs, or provide a copy of your return/replacement policy and explain why the order cannot be repaired/replaced.
062	The Card Member claims the referenced charge should have been submitted as a credit.	Please issue a credit, or provide support and itemization for the charge and an explanation of why credit is not due.
063	The Card Member has requested reimbursement for an item(s)/service(s) that was not as your business described, or credit for the item(s)/service(s) as the Card Member is dissatisfied with the quality.	Please replace the item or issue credit for the item(s)/service(s), or proof that a credit has been issued.

DOCUMENTS MUST:

- Include a copy of the charge record/credit record and other supporting documentation*
- Address the specific dispute reason in the response
- Clearly explain all of the submitted documents and add any changes/edits made to the original purchase/agreement
- Update American Express with steps that have been taken to resolve the dispute

NO KNOWLEDGE

INQUIRY

127

WHAT DOES IT MEAN?

Card Member claims to not recognize or remember the charge.

WHAT SHOULD BE DONE TO PREVENT A CHARGEBACK?

Respond to the Inquiry, or request for information, with as much context about the charge as possible.

Provide:

- A charge record that includes:
 - Card number
 - Card Member name
 - Merchant location
 - Transaction date or the date goods or services were shipped or provided
 - Transaction amount
 - Authorization approval
 - Description of goods or services
 - Copy of the signed receipt or other proof of Card Member consent to bill
- Proof of delivery with the full delivery address (if the charge relates to items that were shipped)

DEADLINE TO RESPOND?



CANCELLED PRODUCT OR SERVICE

CHARGEBACK

C05
retail/service

C18
lodging

C28
recurring billing

WHAT DOES IT MEAN?

Card Member claims that the goods or services ordered were cancelled.

WHAT SHOULD BE DONE TO APPEAL THE CHARGEBACK?

To appeal this Chargeback respond with as much detail as possible.

First, make sure to address the status of the cancellation. If there is no record of the Card Member cancelling the charge, please advise us.

Provide:

- A copy of the cancellation policy,
- An explanation of the procedures for disclosing it to the Card Member, and
- Details explaining how the Card Member did not follow the cancellation policy
or
- A copy of the charge record indicating the terms and conditions of the purchase, and
- Details explaining how the Card Member did not follow the policy
or
- Proof that a credit which directly offsets the disputed charge has already been processed

Additionally, if THE MERCHANT HAS a recurring billing agreement with a Card Member that cancelled THEN all future billings MUST BE CANCELLED

DEADLINE TO RESPOND?



CARD NOT PRESENT



F29

WHAT DOES IT MEAN?

The Card Member denies participating in a mail order, telephone order, or internet charge, and claims it is fraud.

WHAT SHOULD BE DONE TO APPEAL THE CHARGEBACK?

To appeal this Chargeback respond with as much detail as possible.

Provide:

- Proof that the Card Member participated in the charge (e.g. billing authorization, usage details, contract)
- or
- Proof OF AN ATTEMPT to validate the CID WITHOUT A RESPONSE OR WITH AN UNCHECKED RESPONSE.
- or
- Proof OF ADDRESS VALIDATION via authorization and shipped goods to the address we have on file
- or
- Proof that a credit which directly offsets the disputed charge has already been processed

DEADLINE TO RESPOND?



NO REPLY & INSUFFICIENT REPLY



R13

NO REPLY

We did not receive your response within the specified timeframe.

HOW TO AVOID

Respond to the Inquiry within **20 days**, with the appropriate documents and information. Refer to the guide.

R03

INSUFFICIENT REPLY

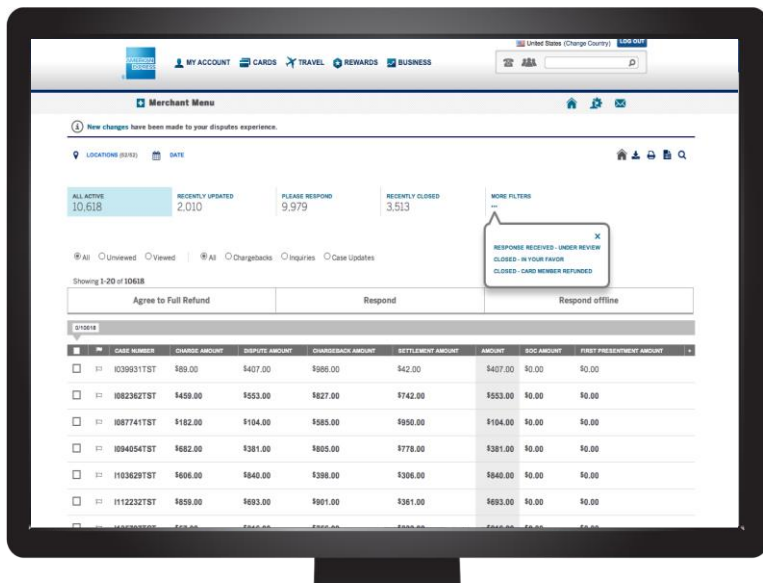
Complete support and/or documentation were not provided as requested.

HOW TO AVOID

Respond within **20 days** and ensure you have provided the appropriate supporting documentation and explanation.

WHERE TO RESPOND TO DISPUTES

ONLINE DISPUTES MANAGEMENT



Login at:
www.americanexpress.com/merchant

MAIL OR FAX



NON-FRAUD
MAIL

AMERICAN EXPRESS CREDIT
CARD ACCOUNT CUSTOMER
SERVICE DEPARTMENT
PO BOX 981532
EL PASO, TX 79998



FAX
623.444.3000



FRAUD
MAIL

OVERNIGHT/SIGNATURE
REQUIRED AMERICAN
EXPRESS
DATAMARK, INC.
43 BUTTERFIELD CIRCLE
EL PASO, TX 79906-5202

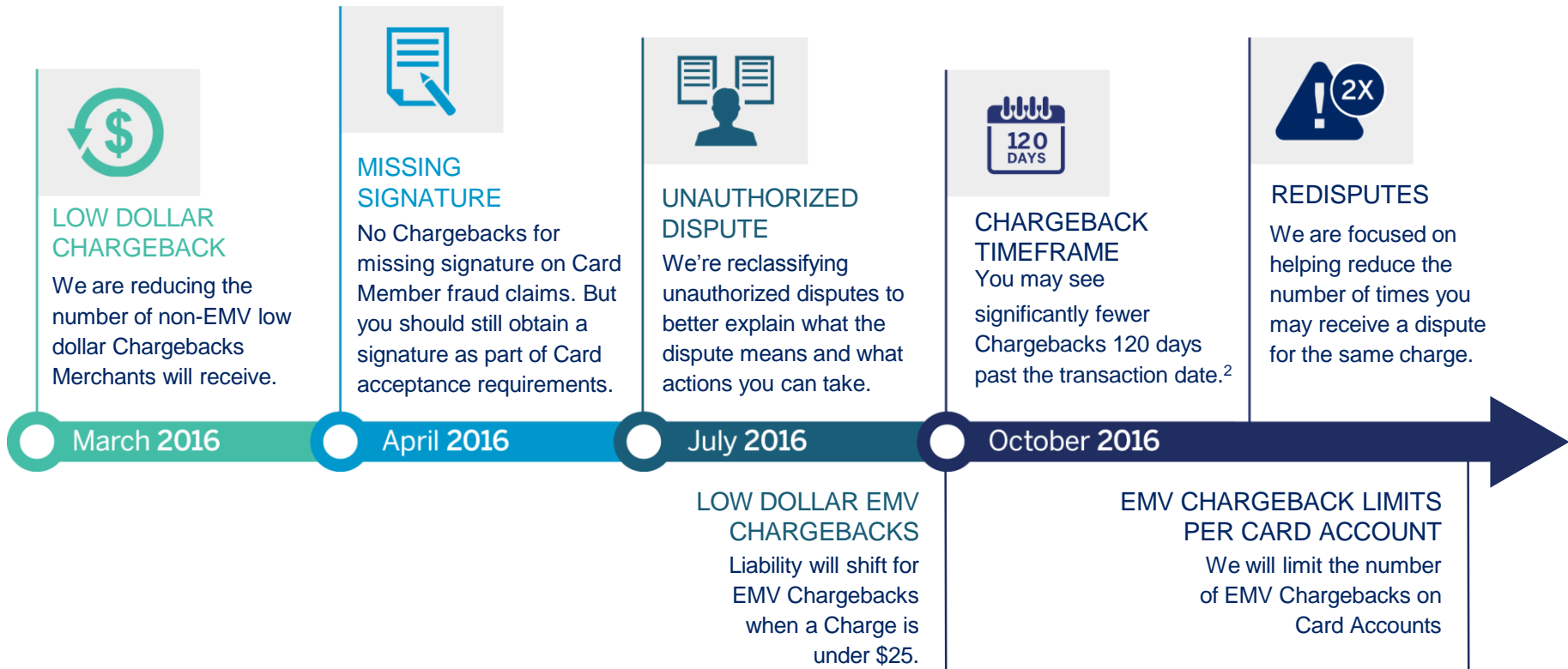


FAX
623.444.3003

AMERICAN EXPRESS POLICIES ENHANCEMENTS

IMPROVED POLICIES, FEWER CHARGEBACKS

We're always looking for ways to enhance our policies. We've heard your feedback and soon you'll see new policies to help you manage your disputes.¹



1. For accurate and up-to-date information about policies and procedures, please refer to the Merchant Regulations. This can be found at www.americanexpress.com/merchantpolicy
2. Some exclusions apply

CLEARER DISPUTE CATEGORIES

We are reclassifying “unauthorized” disputes into more precise and established categories.



SOME CATEGORIES YOU’LL SEE INSTEAD

UNAUTHORIZED DISPUTES: A THING OF THE PAST:

- 1 Did not explain the reason why the Card Member was disputing the charge
- 2 Supporting evidence to prevent this kind of Chargeback wasn’t clear
- 3 Very lengthy timeframes made it difficult to remember necessary details

CANCELLED RECURRING BILLING	DISSATISFIED
NO KNOWLEDGE	NOT RECEIVED
OVERCHARGED	DUPLICATE BILLING
FRAUD	RETURNED
CANCELLED	DAMAGED

THIS IS INTENDED TO HELP YOU:

-  Avoid “No Reply Chargebacks” from simply not knowing *how* to reply.
-  Get clear direction on how to respond and what documents can be used as supporting evidence.

ENHANCEMENTS TO REDUCE CHARGEBACKS

We are taking steps to help reduce the number of non-EMV low dollar amount Chargebacks you may receive and eliminating the 'Missing Signature' Chargeback for fraud altogether.



LOW DOLLAR
CHARGEBACKS

These Chargebacks can add up. We're reducing the number of non-EMV low dollar Chargebacks Merchants see.



MISSING
SIGNATURE
CHARGEBACK

You'll no longer receive fraud Chargebacks for a missing signature. However, getting a signature is still required, as part of the Card acceptance agreement, because it is the best form of proof that the Card member was present at the time of the charge.

LIMITATIONS ON DISPUTES

We are helping to reduce the number of times you may receive a dispute for the same charge and limiting the timeframe in which you may receive a Chargeback

NO MORE THAN
2 DISPUTES
PER TRANSACTION
IN MOST CASES



We are focused on helping reduce the number of times you can receive a dispute for the same charge.

CHARGEBACKS
IN 120 DAYS
OR LESS



We're limiting the Chargeback window to 120 days from the date of the transaction.

A few exceptions:

1. Goods/services not received;
2. Goods/services returned/canceled;
3. Re-disputes. In these instances the timeframe can extend.

CHANGES TO THE EMV CHARGEBACK POLICY

To help limit your fraud costs as you upgrade your point-of-sale systems, and to promote further adoption of EMV in the U.S, we are making important changes to our EMV Chargeback policy.¹

LOW DOLLAR CHARGEBACK THRESHOLD



By August 2016, you will not be held liable for EMV Chargebacks when a Chargeback is under \$25.

CHARGEBACK LIMITS PER CARD ACCOUNT



By the end of 2016, American Express also plans to limit the number of counterfeit fraud Chargebacks to a total of 10 per card account.

The card issuer will bear the financial liability for any additional counterfeit fraud transaction that is disputed on a card account after 10 Chargebacks. This limit does not prevent a Card Member from disputing additional fraudulent transactions.

1. These changes will span the time-frame from implementation to April 2018.

MORE CLARITY TO RESPOND TO A DISPUTE ONLINE

We're revising reason codes on the merchant site to better align with the merchant regulations and the merchant guide, in order to help you avoid "No Reply" or "Insufficient Support" Chargebacks.

Check the Reference Guide on the Merchant Site for a list of reason codes paired with suggestions for what kinds of documents you should submit to help avoid a Chargeback.



QUESTIONS?

THANK YOU

2017 OSC E-Commerce Conference

April 19, 2017

Attendees by Last Name (246)

Michael Adamio - Department of Environmental Quality
Bennie Aiken - NC Department of Insurance
Kathryn Alexander - Forsyth Technical Community College
Lamees Asad - UNC-CH
Khalid Awan - NC Dept. of Public Safety
Debra Bailey - East Carolina University
Rita Baker - North Carolina Department of State Treasurer
Matthew Banko - Alamance Community College
Lorrie Barbee - NC DOT
Leslie Barber - NC Housing Finance Agency
David Barkhau - NCDOT
Jennifer Bell - NC State University
Jeffrey Benfield - Mitchell Community College
Ken Bergman - NCDOT
Jeannie Betts - DHHS
Leslie Blankenship - Isothermal Community College
Jack Brinson - LABOR
Robert Brinson - Department of Public Safety
Roderick Brower - Sandhills Community College
Tonia Brown - North Carolina Department of Insurance
Joetta Brunson - North Carolina Department of Administration
Helen Buck - North Carolina Agricultural and Technical State Univ
Anita Bunch - NC Department of Revenue
Jean Burke - Department of Public Safety
Michelle Burks - Department of Health and Human Services
Mary Ellen Burns - NC Department of Commerce
Charles Bynum – NCDOT
Tim Carroll - North Carolina Housing Finance Agency
Angelika Chafalovitch - NC DPS
Susan Charlton - Department of Public Safety
Steve Chase - NC Wildlife Resources Commission
James Cherokee – DPS
Teresa Childress - City of Greensboro
Clayton Christian - Appalachian State University
Stephen Cochrane - UNC School of the Arts
Bruce Cole - Gaston College
Cindy Collie - Alamance Community College

Tiffany Collins - Durham Technical Community College
Jennifer Coltrane - North Carolina State University
Eloise Covalt - Appalachian State University
Jason Cowan – NCDOT
Dorene Creech – NCDOT
Terry Dail - PORTS AUTHORITY
Audrea Dale – NCDOT
Marjorie Danford - City of Greensboro
David Davila - Town of Apex
Steven Davis – NCDPS
Joyce Davis-Freeman - Department of Environmental Quality
Robin Deaver – FTCC
John Del Greco – NCDPS
Jay Deming – NCDOT
Dana Denton – NCDOT
Johnsie Dickerson - Town of Cary
Mike Dickerson - NC State University
Anthony Downey - North Carolina Education Lottery
Debbie Dryer - University of North Carolina General Administration
Agatha D'Souza - Emergency Programs, NCDA&CS
Angela DuBose - North Carolina A&T State University
Pamela Dummitt - Department of Information Technology
Gwen Earp - NC Department of Justice
Terry Edwards - Appalachian State University
Bivian Ejimakor - NC A&T STATE UNIVERSITY
Laresia Everett - Department of Insurance
Joanne Ferguson - UNC-Wilmington
David Fitzgerald - City of Raleigh
Cliff Flood - UNC-GA
Leah Ford - North Carolina A&T State University
Denise Foutz - Appalachian State Univ
Samiel Fuller - NC Department of Public Instruction
Rosser Glenda - City of Sanford
Jake Gore - NC Real Estate Commission
Kristi Gragg - Appalachian State University
Laura Greenwood - NC Dept of Agriculture
Larna Griffin - State Educational Assistance Authority
Wendy Griffin - NC DOT
Ashley Grindstaff - City of Greensboro, NC
Tabitha Groelle - North Carolina State University
Rosena Grott - Dept of Treasury - Internal Revenue Service
Michelle Hall – FTCC

Clay Hallock - East Carolina University
Jennifer Hamm - Catawba Valley Community College
Keith Hammonds - North Carolina Department of State Treasurer
Luke Harris - NC DOT
Rebekah Hartberger - UNC Charlotte- Controller's Office
Deborah Hartley - North Carolina Psychology Board
Richard Hawk - City of Greensboro
Elizabeth Haynes - USS NC Battleship Commission
Annette Heller - UNC Charlotte- Controller's Office
Calvin Hicks - Guilford County
Freda Hilburn - Dept. of Commerce
Shannon Hobby - Natural and Cultural Resources
Sim Hodges - NC Housing Finance Agency
Katrina Hoffman - Fayetteville State University
Candace Holder - Surry Community College
Susan Holland – NCDOT
Susan Holton - NC State University
Amy Hoover – NCDOT
Sheila Hopkins - Wake County Government
James Horne - North Carolina General Assembly
Heather Horton - NC Department of Commerce
Brandon Howell - Town of Chapel Hill
Scott Hummel - North Carolina A&T State University
Heather Hummer - UNC General Administration
Frances Hunt - UNC Pembroke
Elwanda Hyman-Farrow - Department of Commerce
Suzanne Imboden - East Carolina University
Denise Jackson - NC Department of Public Instruction
Michael Jackson - North Carolina A&T State University
Steve Jacobson – NCWRC
Timothy James - Appalachian State University
Carl Jeeter - North Carolina Division of Parks and Recreation
Bryan Jenkins - NC Community College System
Kauri Jenkins - North Carolina A&T State University
Bud Jennings - NC AOC
Patricia Jeter - NC Utilities Commission
Elizabeth John - NC Administrative Office of the Courts
Debbie Johnson - Surry Community College
Ray Johnson - Department of Information Technology
Cynthia Jones - Fayetteville State University
Sandra Jones - Fayetteville State University
Susan Kearney - NC Dept. of Agriculture & Consumer Services

Gloria King - DHHS Office of the Controller
Bliss Kite - NC Utilities Commission
Jim Knight – NCEL
Oscar Knight - Appalachian State University
Barry Knuth – NCDOT
Heidi Kozlowski - NC State University
Ariana Kudrats - NC Housing Finance Agency
Darlene Langston - Department of Public Safety
Niem Le - Central Piedmont Community College
Kizzy Lea - Rowan-Cabarrus Community College
Charonda Lee - NC Wildlife Resources Commission
Linda Lejnar - Wake Technical Community College
Ellen Lewis - Town of Cary
Christopher Long - NC Department of Revenue
Matthew Longobardi - NC Department of Justice
Frank Lord - Winston-Salem State University
Felecia Lucas - NC DHHS
Tami Luckwaldt - Department of Insurance
Evelyn Makatiani - UNC-Chapel Hill
Jon Manlove - UNC CHAPEL HILL
Shaila McDougal - NC Wildlife Resources Commission
Shirley McFadden - City of Raleigh
Sorina McInturff - Appalachian State University
Jackie McKoy - North Carolina Department of Revenue
Jessica McMahan - Lenoir Community College
John Meese - NC Housing Finance Agency
Joel Mercer - NC Division of Medical Assistance
Marvin Miller - PUBLIC SAFETY
Firoza Mistry - UNC HOSPITALS
Kimberly Mitchell – DIT
Robert Mitchell – UNCG
Susan Morey - Town of Cary
Roberta Morgart - NC Department of Public Safety
Tim Morris - East Carolina University
Mary Morton – NCDOT
Michelle Munden - College of The Albemarle
Debra Neal - NC Department of Public Safety
Joseph Niswonger – NCDOT
Liza Nordstrom - Durham Technical Community College
Hans Norland - nc dps
Tony Norwood - NC Department of Administration
Teresa O'Briant - NC DA & Consumer Division Food Division

Brooke O'Neal - UNC CHAPEL HILL
Kim Orr - UNC CHAPEL HILL
Bridget Paschal - Department of Commerce
Patty Peebles - East Carolina University
Gary Penrod - UNC School of the Arts
Amy Penson - Isothermal Community College
Landon Perry – DEQ
Meera Phaltankar - NC Department of Public Instruction
Tina Pickett - DHHS Office of the Controller
Carl Pickney – NCDOT
Dell Pinkston - Department of Information Technology
Tiesha Pope - NC Department of Justice
Suresh Pothireddy – NCDOT
Sarah Powell - NC DOT
Ashley Price - Office of the State Auditor
David Price - North Carolina State University
Wanda Pugh-Trice - PORTS AUTHORITY
Lionetta Raynor - North Carolina Department of Transportation
Pyreddy Reddy - NC Department of Health and Human Services
Stephen Reeves – NCCCS
Lymari Rentas-Gonzalez - Department of Health and Human Services
Cindy Retchin - UNC-Wilmington
Cindy Revels - UNC Pembroke
Steven Rhew - The University of North Carolina at Greensboro
Paula Ricard - NC Real Estate Commission
Amanda Richardson - Department of Natural & Cultural Resources
Amber Roberts - UNC Charlotte- Controller's Office
Amy Robinson - NC Department of Environmental Quality
Al Roethlisberger - NCDOT
Wayne Rogers - NC DOT
Barbara Roper - NCWRC
Elizabeth Rozakis - NC State Education Assistance Authority
Cynthia Salgado - Local Government
Anthony Sanders - NC State University Bookstores
Camilla Sandlin - North Carolina Education Lottery
Lei Satterfield - NC Dept of Revenue
Joan Saucier - NC Department of Public Safety
William Schmidt - DNCR
Dilip Shah - NC Education Lottery Commission
Peta-Gaye Shaw - Administration
Ernest Simons - Pitt Community College
DP Singla - UNC General Administration

Becky Smith - UNC Charlotte- Controller's Office
Betty Smith – FTCC
Charles Smith – FTCC
Debra Smith - NC Community College System
Jonathan Smith - Winston-Salem State University
Laurie Smith – NCDOT
Tawnya Smith - North Carolina Justice Academy
Susan Soques – NCWRC
Mary Frances Stalls - East Carolina University
Rebecca Stewart - North Carolina Auctioneer Licensing Board
Steven Stewart - NC Department of Natural & Cultural Resources
Heather Stiles - Wake County Government
Amy Strange - State Board of Elections
Carol Strickland - Fayetteville State University
John Stroud - NC Department of Transportation
Marla Tart - Wake Technical Community College
Wesley Taylor - NC General Assembly
Karen Thiessen - Wake County Finance Department
Elizabeth Thomas - Sandhills Community College
Tuyen Tran - NC State University Bookstores
Laurie Trumbo - The University of North Carolina at Chapel Hill
Bobby Tuggle - East Carolina University
Mark Tyler – Insurance
Kim Van Metre - NC Department of Environmental Quality
Prabhavathi Vijayaraghavan - Department of Public Instruction
Hunter Wagstaff - UNC Health Care System
Zimbalist Walker – NCDOT
Gary Ward – NCCU
Dianne Ware-Furlow - UNC-CH
Brian Watkins - NC DOT
Theresa Watson - NC Department of Administration
Lily West - NC DPS
Rex Whaley - NC Department of Environmental Quality
Jim Wilder - NC State University Bookstores
Ashley Williams - Fayetteville State University
Brian Williford – NCDOT
Frank Winn – NCDOT
Charlie Wright - Department of Transportation
Michelle Yeager - East Carolina University
Michael Zanchelli – DHHS
Fenge Zhang - Dept. of Commerce

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Michelle Burks - Department of Health and Human Services
Pamela Dummitt - Department of Information Technology
Dell Pinkston - Department of Information Technology
Laresia Everett - Department of Insurance
Tami Luckwaldt - Department of Insurance
Prabhavathi Vijayaraghavan - Department of Public Instruction
Robert Brinson - Department of Public Safety
Jean Burke - Department of Public Safety
Susan Charlton - Department of Public Safety
Darlene Langston - Department of Public Safety
Charlie Wright - Department of Transportation

Rosena Grott - Dept of Treasury - Internal Revenue Service
Freda Hilburn - Dept. of Commerce
Fenge Zhang - Dept. of Commerce
Landon Perry – DEQ
Jeannie Betts – DHHS
Michael Zanchelli – DHHS
Gloria King - DHHS Office of the Controller
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Tony Norwood - NC Department of Administration
Theresa Watson - NC Department of Administration
Heather Horton - NC Department of Commerce
Mary Ellen Burns - NC Department of Commerce
Amy Robinson - NC Department of Environmental Quality
Kim Van Metre - NC Department of Environmental Quality
Pyreddy Reddy - NC Department of Health and Human Services
Lymari Rentas-Gonzalez - NC Dept of Health and Human Services
Bennie Aiken - NC Department of Insurance
Gwen Earp - NC Department of Justice
Matthew Longobardi - NC Department of Justice
Tiesha Pope - NC Department of Justice
Amanda Richardson - NC Dept of Natural & Cultural Resources
Steven Stewart - NC Department of Natural & Cultural Resources
Samiel Fuller - NC Department of Public Instruction
Denise Jackson - NC Department of Public Instruction
Meera Phaltankar - NC Department of Public Instruction
Roberta Morgart - NC Department of Public Safety
Debra Neal - NC Department of Public Safety
Joan Saucier - NC Department of Public Safety
Anita Bunch - NC Department of Revenue
Christopher Long - NC Department of Revenue
John Stroud - NC Department of Transportation
Laura Greenwood - NC Dept of Agriculture
Lei Satterfield - NC Dept of Revenue
Susan Kearney - NC Dept. of Agriculture & Consumer Services
Khalid Awan - NC Dept. of Public Safety
Felecia Lucas - NC DHHS
Joel Mercer - NC Division of Medical Assistance
Lorrie Barbee - NC DOT
Wendy Griffin - NC DOT
Luke Harris - NC DOT
Sarah Powell - NC DOT
Wayne Rogers - NC DOT
Brian Watkins - NC DOT
Angelika Chafalovitch - NC DPS

Hans Norland – NC DPS
Lily West - NC DPS
Dilip Shah - NC Education Lottery Commission
Wesley Taylor - NC General Assembly
Leslie Barber - NC Housing Finance Agency
Sim Hodges - NC Housing Finance Agency
Ariana Kudlats - NC Housing Finance Agency
John Meese - NC Housing Finance Agency
Jake Gore - NC Real Estate Commission
Paula Ricard - NC Real Estate Commission
Elizabeth Rozakis - NC State Education Assistance Authority
Jennifer Bell - NC State University
Mike Dickerson - NC State University
Susan Holton - NC State University
Heidi Kozlowski - NC State University
Anthony Sanders - NC State University Bookstores
Tuyen Tran - NC State University Bookstores
Jim Wilder - NC State University Bookstores
Patricia Jeter - NC Utilities Commission
Bliss Kite - NC Utilities Commission
Steve Chase - NC Wildlife Resources Commission
Charonda Lee - NC Wildlife Resources Commission
Shaila McDougal - NC Wildlife Resources Commission
Stephen Reeves - NCCCS
Gary Ward – NCCU
David Barkhau – NCDOT
Ken Bergman – NCDOT
Charles Bynum – NCDOT
Jason Cowan – NCDOT
Dorene Creech – NCDOT
Audrea Dale – NCDOT
Jay Deming – NCDOT
Dana Denton – NCDOT
Susan Holland – NCDOT
Amy Hoover – NCDOT
Barry Knuth – NCDOT
Mary Morton – NCDOT
Joseph Niswonger - NCDOT
Carl Pickney – NCDOT
Suresh Pothireddy - NCDOT
Al Roethlisberger - NCDOT
Laurie Smith – NCDOT

Zimbalist Walker – NCDOT
Brian Williford – NCDOT
Frank Winn – NCDOT
Steven Davis – NCDPS
John Del Greco – NCDPS
Jim Knight – NCEL
Steve Jacobson – NCWRC
Barbara Roper – NCWRC
Susan Soques – NCWRC
Angela DuBose - North Carolina A&T State University
Leah Ford - North Carolina A&T State University
Scott Hummel - North Carolina A&T State University
Michael Jackson - North Carolina A&T State University
Kauri Jenkins - North Carolina A&T State University
Helen Buck - NC Agricultural and Technical State University
Rebecca Stewart - North Carolina Auctioneer Licensing Board
Joetta Brunson - North Carolina Department of Administration
Rex Whaley – NC Department of Environmental Quality
Tonia Brown - North Carolina Department of Insurance
Jackie McKoy - North Carolina Department of Revenue
Rita Baker - North Carolina Department of State Treasurer
Keith Hammonds - NC Department of State Treasurer
Lonneta Raynor - North Carolina Department of Transportation
Carl Jeeter - North Carolina Division of Parks and Recreation
Anthony Downey - North Carolina Education Lottery
Camilla Sandlin - North Carolina Education Lottery
James Horne - North Carolina General Assembly
Tim Carroll - North Carolina Housing Finance Agency
Tawnya Smith - North Carolina Justice Academy
Deborah Hartley - North Carolina Psychology Board
Jennifer Coltrane - North Carolina State University
Tabitha Groelle - North Carolina State University
David Price - North Carolina State University
Ashley Price - Office of the State Auditor
Ernest Simons - Pitt Community College
Terry Dail - PORTS AUTHORITY
Wanda Pugh-Trice - PORTS AUTHORITY
Marvin Miller - PUBLIC SAFETY
Kizzy Lea - Rowan-Cabarrus Community College
Roderick Brower - Sandhills Community College
Elizabeth Thomas - Sandhills Community College
Amy Strange - State Board of Elections

Larna Griffin - State Educational Assistance Authority
Candace Holder - Surry Community College
Debbie Johnson - Surry Community College
Laurie Trumbo - University of North Carolina at Chapel Hill
Steven Rhew - University of North Carolina at Greensboro
David Davila - Town of Apex
Johnsie Dickerson - Town of Cary
Ellen Lewis - Town of Cary
Susan Morey - Town of Cary
Brandon Howell - Town of Chapel Hill
Jon Manlove - UNC CHAPEL HILL
Brooke O'Neal - UNC CHAPEL HILL
Kim Orr - UNC CHAPEL HILL
Rebekah Hartberger - UNC Charlotte- Controller's Office
Annette Heller - UNC Charlotte- Controller's Office
Amber Roberts - UNC Charlotte- Controller's Office
Becky Smith - UNC Charlotte- Controller's Office
Heather Hummer - UNC General Administration
DP Singla - UNC General Administration
Hunter Wagstaff - UNC Health Care System
Firoza Mistry - UNC HOSPITALS
Frances Hunt - UNC Pembroke
Cindy Revels - UNC Pembroke
Stephen Cochrane - UNC School of the Arts
Gary Penrod - UNC School of the Arts
Lamees Asad - UNC-CH
Dianne Ware-Furlow - UNC-CH
Evelyn Makatiani - UNC-Chapel Hill
Robert Mitchell – UNCG
Cliff Flood - UNC-GA
Joanne Ferguson - UNC-Wilmington
Cindy Retchin - UNC-Wilmington
Debbie Dryer - University of North Carolina General Administration
Elizabeth Haynes - USS NC Battleship Commission
Karen Thiessen - Wake County Finance Department
Sheila Hopkins - Wake County Government
Heather Stiles - Wake County Government
Linda Lejnar - Wake Technical Community College
Marla Tart - Wake Technical Community College
Frank Lord - Winston-Salem State University
Jonathan Smith - Winston-Salem State University